

## 27. Empty categories and ellipsis

### 1. The limits of ellipsis

A rather striking and cross-linguistically prominent property of natural language is the presence of phonetically unrealized elements in a sentence, necessary for its correct interpretation. This general phenomenon, in which unpronounced elements are interpreted, falls under the heading of ellipsis.

As we will see, there is much variety with respect to the distribution and conditions on interpretation of the *gaps* left behind by ellipsis. Nevertheless, there are three fundamental questions crucial for their understanding, which individual case of ellipsis must provide an answer to:

1. What is the nature of the gap? Is it internally atomic or internally complex?
2. What syntactic conditions allow for the presence of the gap?
3. How is the gap's semantic information recovered?

In this section of the chapter, we outline the range of elliptical constructions, and offer some brief remarks regarding their construction specific properties. In section 2 of the chapter, we address the three overarching questions noted above.

#### 1.1 Empty (pro)nominal categories.

As a starting point to the range of elliptical phenomena, we discuss cases of empty pronominal and nominal categories. Consider, first, the sentence in (1), which contains the null pronominal subject characterizing null subject languages (NSL):

(1) *pro* vino.

There is an unpronounced definite pronoun in subject position, represented as *pro*, an empty category first proposed by Chomsky (1981) (see also Jaeggli 1982).

Consider another type of unpronounced subject in (1), represented by PRO, in (2).

(2) Juan intentó PRO salir

Although both null elements are subjects, they show significant differences. As illustrated in (1) and (2) respectively, *pro* appears in finite contexts, while PRO is limited to non-finite contexts. Additionally, whereas PRO is arguably found universally, *pro* is not; it is typically associated with ‘rich’ verbal inflection (cf. Jaeggli & Safir 1989 for a different take) or ‘strong agreement’ (Chomsky 1981).

With respect to PRO, Chomsky (1981) argues that its properties and distribution follow from the binding conditions under the assumption that PRO is both [+pronominal] and [+anaphoric]. This entails that it must both be bound and free within its governing domain. Since these contradictory conditions cannot simultaneously be met, PRO must be ungoverned. Non-finite Infl is not a governor, thus, its position as subject of finite clause. Observe in (2) that the controller (that is, the antecedent) of PRO is the matrix subject *Juan*. This illustrates a case of *obligatory control*, which contrasts with cases of *non-obligatory control*, illustrated in (3).

(3) Juan piensa que PRO jugar a la lotería es malo.

The subject of *jugar* can refer to Juan, but does not have to. It can receive an arbitrary interpretation as well. Thus, it is not obligatorily controlled. Observe also that PRO can appear in adjunct clauses as well:

(4) PRO caminando despistado, Juan se cayó.

In minimalist literature cases of obligatory control have been reanalyzed as involving movement of the controller from the position occupied by PRO (Hornstein 1999, 2000). This would entail that PRO is just a copy of the controller itself, eliminating the need of the existence of PRO as a separate syntactic element. See more discussion of PRO in CHAPTER INFINITIVES.

Returning to *pro*, it is worth noting that it does not appear to be a single homogenous element. We can differentiate between expletive subjects of unaccusative verbs in (5a), unspecified subjects in (5b), and null subjects of weather verbs (5c):

- (5) a. *pro* parece que Juan está enfermo [Jaeggli & Safir 1989]  
b. *pro* llaman a la puerta  
c. *pro* llueve intensamente

There are also several ways in which *pro* differs from overt definite pronouns in Spanish, as observed for a variety of NSLs (see Holmberg & Roberts (2005), who cite Jespersen (1924), Luján (1999), Fernández Soriano (1988, 1999), among others). One interesting difference regards the subject of an embedded verb. As observed by Montalbetti (1984) only when *pro* is subject can the embedded and matrix subject be coreferential, a situation referred to as obviation:

- (6) Muchos chicos<sub>i</sub> dijeron que *pro*<sub>i</sub>/ellos<sub>k</sub> vendrían.

Studies on *pro* led to the proposal of a very influential parameter, the *null subject* (or *pro drop*) *parameter* (Rizzi 1982, 1986). Several properties were argued to be associated with it, which have been taken as support for the Principles and Parameter theory. In more recent literature, however, doubts have been raised regarding the co-occurrence of all of these properties (See Boeckx (to appear), Jaeggli & Safir (1989), Perlmutter (1971), Rizzi (1999), Holmberg & Roberts (2005) for relevant discussion and references). Moreover, there are languages without rich agreement, yet show rampant null subjects (and objects), such as Chinese. In these so-called “topic drop” languages, both subject and object pronouns can be dropped under the appropriate discourse conditions.

In addition to the empty pronominal elements *pro* and PRO, there are cases of ellipsis in Spanish in which only the head of the NP is elided, illustrated in (7).

(7) a. El ~~café~~ de Colombia es el mejor café que conozco

Traditionally it has been assumed that the determiner must be phonetically realized for N-ellipsis to obtain. Eguren (2008), however, contests this assumption.<sup>1</sup> If the DP is headed by the definite or indefinite article, the complement of the elided N is obligatory. Note the contrast between (7) and (8).

(8) \*El ~~café de Colombia~~ es el mejor café que conozco.

Finally, note that if the complement that accompanies the determiner is a prepositional phrase it must be headed by *de*, as illustrated in (7). Contrast the use of *de* with the use of *a* in (9)

(9) a. \*El tren a Sevilla y el ~~tren~~ a Barcelona han salido con retraso.

b. El tren de Sevilla y el ~~tren~~ de Barcelona han salido con retraso

Other cases of N-ellipsis involve *alguno* or *uno*, as in *algún profesor* > *alguno* and *un profesor* > *uno*, respectively. The change in morphological form depends on the presence of the noun head; this suggests that these pairs may be two categorially different lexical items, a stance representative of traditional grammars. However, this categorial duplication raises doubts, since it should affect all classes of determiners and quantifiers. See Bosque (1989) for some arguments against the general categorial proliferation approach.

## 1.2 Verbal ellipsis

The unifying trait of verbal elliptical constructions is its lack of an overt verb, although other VP elements can also be phonetically unexpressed. The relevant constructions include gapping, TP-ellipsis, null complement anaphora and sluicing, among others.

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<sup>1</sup> See Eguren (2009, 2010) for a discussion of the licensing conditions on N-ellipsis in Spanish in terms of a contrastive focus constraint, as well as reasons to conclude that the empty nominal head is not the result of a ph-deletion operation.

### 1.2.1. Gapping

Characteristically, gapping occurs in coordinated structures and consists of the ellipsis of one conjunct's verb when its meaning can be recovered from the immediately preceding verb:

(10) *Álex toca el violín y Marta ~~toca~~ el piano*

Some remnant must remain (contrast 10 and 11a), whether it is an argument or an adjunct, as in (11b).

(11)a. \**Álex toca el violín y Marta ~~toca el violín~~*

b. *Álex toca el violín desde pequeño y Marta ~~toca el violín~~ desde hace sólo 2 años*

The overt material in gapped sentences includes a contrastive topic, placed before the gap, and a contrastive focus (the VP-remnant), to the left of it. Normally, the contrastive topic is the subject of the sentence, but sometimes it can also be a topic placed at the left border of the sentence, as in *A Antonia la convocó Luis y a María, ~~la convocó~~ Julia*.

The interpretation of a gap can be obtained by means of a transitive relation, in which in a series of three verbs, the first provides the content for the second two, as in *Álex toca el violín, Marta ~~toca~~ el piano y Pascual ~~toca~~ el saxo*. Moreover, the antecedent of gapping must fulfil a strict requirement of parallelism: it has to be the first overt predicate of the most immediately preceding coordinate conjunct. The strong requirement of parallelism that gapping imposes cannot be met by subordination.

The gap can contain material that is discontinuously arranged in the antecedent. So, for instance, it is not possible to interpret *María* in (12) as playing the piano in a place or day different from the ones contained in the first conjunct:

(12) *Luis toca el violín el viernes en aquel bar y María ~~toca el piano el viernes en aquel bar~~*

One important consequence of this fact is that both the gap and the remnant need not form a unitary constituent, as (12) exemplifies. This feature is particular to gapping; it is not shared by the other kinds of verbal ellipsis. In order to preserve the constituency of the gap, some authors –for instance, Brucart (1987) and Coppock (2001)– have proposed a rule that right-adjoins the remnant, which allows deletion of all the material inside the gapped VP.<sup>2</sup> This analysis allows for the characterization of the deletion site of gapping as a unitary constituent.

Nevertheless, the close relation gapping has with information structure and discourse and the lack of strict structural requirements has led some authors to question whether it is properly a case of ellipsis. In this respect, there have been proposals which consider gapping the result of across-the-board (ATB) movement operations that apply to coordinate structures, as proposed originally by Goodall (1987). On this story, there is no deletion mechanism in the derivation of these constructions, but only internal merge operations. The most controversial point of the coordination analysis for gapping is that the raising of the subject of the first conjunct violates the Coordinate Structure Constraint (CSC) (Ross, 1967) and the ATB rule application (Williams, 1978), as its counterpart in the second conjunct is not affected by any movement operation. For a recent proposal of this kind and a critical assessment of the different analyses, see Johnson (2009), and for some arguments against the non-ellipsis analysis of gapping, see Vicente (2010). A variant of the ATB analysis that circumvents the CSC violation consists of adhering to the sideward movement theory proposed by Nunes (2001). For an analysis of gapping in these terms, see Agbayani & Zoerner (2004).

### 1.2.2. TP-ellipsis

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<sup>2</sup> Oehrle (1987) and Johnson (1994) propose that the category that corresponds to the second conjunct in a gapping structure is vP, not TP. See also López & Winkler (2003).

Unlike English, Spanish lacks VP-ellipsis. Spanish, however, does have TP-ellipsis, illustrated in (13).<sup>3</sup>

(13) Juan no invitó a María a la fiesta, pero ~~Álex sí invitó a María a la fiesta.~~

The second conjunct does not contain a tense affix, only the affirmative polarity adverb *sí*. Thus, the elliptical site in Spanish does not correspond to VP, but to the next higher projection: TP. Assuming that Laka's (1990)  $\Sigma_P$ , a projection that houses negative and emphatic affirmative polarity items, is the functional head licensing TP-ellipsis, the structure of TP-ellipsis would be:  $[\Sigma_P \text{ sí/no/también/tampoco } [_{TP} \text{ TP } \dots]]$ . Tense here is included in the gap, therefore, the tense of the elliptical clause cannot differ from the tense of the antecedent clause. One of the four polarity items in Spanish is required to license TP-ellipsis. Suñer (1995) and Laka (1990) place *sí* and *no* in  $\Sigma^0$  and *también* and *tampoco* in Spec,  $\Sigma^0$ , an option that seems plausible. All these polarity elements can be preceded by modal, aspectual or quantificational adverbs. Additionally, it appears that the overt constituent that appears in the first position of the elliptical clause in Spanish is a topic (López, 1999), as the following data suggest.<sup>4</sup>

(13) A María la han aprobado, pero a Luisa no ~~la han aprobado.~~

Contrasting with gapping, observe that TP-ellipsis is available in turn-taking by different speakers. Thus (15) can be a reply to *tengo prisa*:

(15) Yo también ~~tengo prisa.~~

Note also that in TP-ellipsis, a cataphoric relation can hold between the antecedent and the gap, but only when the elliptical clause and the one containing the antecedent belong to the same utterance: *Quizás usted no se equivocó, pero la mayoría nos equivocamos* (Jorge Volpi, *En busca de Klingsor*).

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<sup>3</sup> The reasons why Spanish lacks VP-ellipsis and English does not have TP-ellipsis have been investigated by Zagona (1988) and Lobeck (1999).

<sup>4</sup> After López (1999), Depiante (2004) and Saab (2010) have pointed out the close relation that exists between TP-ellipsis and (clitic) left-dislocation.

Finally, TP-ellipsis is compatible with subordination contexts, as first pointed out in Brucart (1987). Either the clause of the antecedent or the elliptical one can be embedded:

(16) Yo creo que María tiene razón, pero Luis no.

(16) is ambiguous: the counterpart of *Luis* can be *yo* or *María*, as the following complete versions show, where the square brackets reflect the boundaries of the adversative coordination:

- (17) a. [ Yo creo que María tiene razón, pero Luis no  ~~cree que María tenga razón~~ ]  
b. Yo creo que [ María tiene razón, pero Luis no  ~~tiene razón~~ ]

Nonetheless, the interaction of TP-ellipsis with subordination is complex. As noted by López (1999), TP-ellipsis in Spanish includes parallelistic and contrastive requirements with respect to the antecedent. On the one hand, the relation with the antecedent cannot be hipotactic, but paratactic (Gallego, 2009), which discards the matrix predicate from counting as the antecedent. On the other hand, there are also parallelistic constraints related to information structure. Consider the example in (18):

(18) Luis tiene razón, pero creo que María no  ~~tiene razón~~.

In (18), the elliptical site is in a complement clause, but the relation with the antecedent is not hipotactic, but paratactic, which satisfies the parallelistic and contrastive requirements.

Bosque (1984) points out that only assertive predicates, which don't presuppose the truth of the subordinate clause, can select a clause with TP-ellipsis. There are, however, factive predicates that can take a subordinate clause with TP-ellipsis, as *reconocer* or *saber*. It appears that only emotive factive predicates (as *lamentar*), which include an evaluation of the situation denoted by the complement, exclude TP-ellipsis.

### 1.2.3. Sluicing

Sluicing refers to a phenomenon in which a wh-phrase, which introduces an indirect question, appears in isolation, as illustrated in (19).

(19) Alguien me habló, pero no recuerdo quién ~~me habló~~.

The unpronounced portion in (19) is often analyzed as an entire CP whose TP has been elided (originating with Ross 1969, see also Merchant 2001, and van Riemsdijk 1978 for a different account) as illustrated in (20).

(20) Alguien me habló, pero no recuerdo [<sub>CP</sub> quién [<sub>TP</sub> ~~me habló~~ ]]

One important argument in favor of the full CP account is that only predicates that select for indirect question CP complements allow sluicing (see Merchant 2001 and references therein for several other arguments for a full CP analysis of sluiced wh-phrases from several languages), as illustrated in (21), taken from Brucart (1999):

- (21) a. Se entrevistó con alguien, pero no dijo con quién.  
b. \*Se entrevistó con alguien, pero no aceptó con quién.

Sluices need to be licensed by an antecedent in the clause (although there are cases of discourse antecedents as well; see Brucart 1999). One leading idea coming from studies on VP ellipsis (see for instance Fiengo & May 1994) is that there is a structural isomorphism with between the elided TP and its antecedent. However, this is easily shown not to hold:

(22) Admite haberle conocido, pero no recuerda cuándo [~~le conoció~~]/[\*haberle conocido]

These facts suggest that there are semantic conditions on the licensing of a sluice (see Merchant 2001).

Although there is no structural isomorphism with the antecedent, the elided TP is often taken to have fundamentally the same internal structure of non-elided TPs. In this

respect, the lack of pronunciation is just the result of a PF-phenomenon. However, under this assumption, the contrasts in (23), noted by Ross (1969), raise questions:

- (23) a. Es cierto que ha alegado una prueba concluyente, pero no pienso decir cuál.  
b. \*No pienso decir qué prueba concluyente es cierto que ha alegado.

If it is the case that the internal structure of the elliptical site has the same syntax as overt TPs, then how is it that sluicing can avoid the island violation in (23b)? The complex NP is just one example where sluicing avoids island violations. See Ross (1969), Bruccart (1999) and Chung et al. (1995) for others. One possibility is explored in Merchant (2001), who proposes that some islands are PF-phenomena, and thus, given that the elliptical site is the result of PF-deletion, there is no island violation at all.

#### 1.2.4. Null-complement anaphora

In this construction, the infinitival or sentential complement of a restricted class of predicates is covertly realized, as in (24):

- (24) Intentó entrar en el edificio, pero no pudo ~~entrar en el edificio~~.

The verbs that allow the null-complement anaphora (henceforth, NCA) constitute a miscellaneous class. They are modals (*poder, querer, deber, saber*), aspectuals (*empezar a, comenzar a, acabar de, terminar de, dejar de, soler*), causatives (*dejar, autorizar a, ayudar a, enseñar a, informar de, invitar a, obligar a, persuadir de, disuadir de*) and verbs that –in terms of Bosque (1984)– denote “attitudes, predispositions and purposes” of the subject (*aceptar, aprender a, dudar de, rehusar, renunciar a*). The latter class also includes pronominal verbs that take prepositional clausal complements (*acordarse de, decidirse a, enfadarse por, extrañarse de/por, negarse a, olvidarse de, oponerse a, quejarse de*, among others).

Many NCA verbs take a prepositional clausal complement, the presence of which precludes the use of the accusative clitic *lo*. This accords with Bruccart's (1999) observation that, in general, the predicates that accept NCA are those that do not allow their clausal complement to be represented by the clitic *lo*. With respect to non-prepositional NCA verbs, the incompatibility with *lo* can be explained by appeal to semantics. Modal and aspectual verbs tend to reject accusative clitics (*\*lo {puede/ suele/ quiere}* vs. *{puede /suele/quiere} hacerlo*). The only potential exception is *saber*, which accepts the pronominalization of the sentential complement in *Sabía que pasaría > Lo sabía*. Nevertheless, this is not the modal use of this verb. When it refers to a capacity of the subject, the clitic is only available with the verbal proform: *Intentó resolver el problema, pero no {( \*lo) supo/ supo hacerlo}*. Causative verbs show the same behavior: *Dejó que eso pasara* cannot be represented as *\*Lo dejó*.

Two verbs that do not take a prepositional clausal complement are *aceptar* and *rehusar*. Both accept NCA and accusative clitics as well, but there seems also to be a difference in meaning between both uses: when these verbs allow NCA, they refer to the performative act of accepting or refusing an offer ('to say yes or no'). On the contrary, when they combine with an accusative clitic, they denote the mental activity related to making a decision.

Hankamer & Sag (1976) characterize NCA as a case of deep anaphora, that is, the gaps are atomic, having no apparent internal structure. Depiante (2001) comes to the same conclusion, based on the impossibility of extracting material from inside the elliptical clause, a fact previously observed by Zubizarreta (1982), illustrated in (25) by the unavailability of clitic climbing:

(25) *\*Juan las puede ver y María también las puede.*

Related to the same fact is that NCA do not allow the epistemic reading of modals, as originally noted by Sáez del Álamo (1987). Observe in (26) that the subjects only receive a root interpretation, in which they have the ability, or permission, to translate the article.

(26) Juan puede traducir ese artículo y Pedro también puede.

This contrasts with *Juan puede traducir ese artículo*, which has the root interpretation and the epistemic interpretation (“it is possible that Juan translates that article”). Analyzing epistemic modals as raising verbs, in contrast to root modals, the asymmetry falls out, since raising the subject from the second conjunct in (26) is unavailable in NCA.

#### 1.2.5. Other kinds of verbal ellipsis

Besides the major cases of ellipsis introduced in the previous sections, there are other cases, which for the sake of space we simply mention here. The first is *Coordination Reduction* (CR), a construction exemplified in (27):

(27) Juan le regaló a María un libro y ~~le regaló~~ a Pedro un atlas.

Like gapping, CR always occurs in coordinated structures. However, different from gapping, the elliptical site appears in the first position of the coordinate conjunct, immediately after the coordinate conjunction.<sup>5</sup>

The overt material in the second conjunct in (27) does not form a single constituent, thus, these appear not to be cases of phrasal coordination without ellipsis. Nevertheless, there have been proposals which treat these constructions without ellipsis,

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<sup>5</sup> It would be possible to argue that (27) is an instance of gapping where the first constituent is topicalized or, alternatively, by proposing that there is a null empty pronominal subject (*pro*) in the second coordinated conjunct. But these analyses are inadequate for languages that license structures like in (27) but are not pro-drop languages or have more constrained topicalization procedures, such as English.

such as a three-dimensional approach to coordination. In such an account, there is only one subject and one verb in (27) for both coordinate conjuncts. A rule of linearization then establishes the superficial order between the elements of coordination. An alternative to this ATB analysis employs sideward movement as proposed by Nunes & Uriagereka (2000) and Nunes (2001). For an account in these terms that includes Spanish data, see Fernández-Salgueiro (2008).

Another instance of verbal ellipsis is *Comparative ellipsis* (CE), occurring in comparative clauses that have a complement headed by *que* or *como*:

(28) Juan tiene tantos hermanos como ~~hermanos tiene~~ María

In (28) the material lexically identical to its corresponding correlate in the matrix clause is covertly realized, so the only overt elements are those that are different and, consequently, contrastive. The mechanism is therefore reminiscent of other parallelistic ellipses, but it is interesting to note that the correlate of the quantified phrase is preposed. For a detailed analysis of these constructions, see Reglero (2007) and Brucart (2003). In comparatives of inequality, the complement can also be introduced by *de* (*Juan tiene más hermanos de los que tiene María*). In such cases, the subordinate clause is a quantitative relative and there has to be a verb overtly realized (*\*Juan tiene más hermanos de los que María*). But the possibility of eliding the repeated predicate reappears when it occurs in a completive clause selected by the verb of the quantificational relative: *Juan tiene más hermanos de los que decía ~~que tenía~~*.

The last construction to be mentioned is *Stripping*. Stripping consists of an affirmative or negative polarity operator preceding an argument of the covert verb, illustrated in (29).

(29) Se lo dijo a Pedro, pero no ~~se lo dijo~~ a María.

One might consider (29) a stylistic version of TP-ellipsis, but as Depiante (2000, 2004) has shown, both differ in a number of properties. Stripping resembles gapping, and differs from TP-ellipsis, in two important aspects. First, it is only available in coordination. *A María no* can be a valid answer to a question like *¿A quién se lo ha dicho Pedro?*, but it would be less natural to utter in the same context *No a María*.<sup>6</sup> Second, stripping cannot occur in a subordinate structure. For an analysis of these constructions relying on information structure principles, see Vicente (2006) and Depiante & Vicente (2009).

### 1.3. Fragments

Sentence fragments constitute the most radical version of ellipsis, since they do not present the customary binary structure –subject-predicate or topic-comment– that characterizes clausal projections. There are many variants of them, but the most common corresponds to answer fragments:

(30) Q: –¿Qué hará el rector?                      A: –Avisar a la decana.

From a structural point of view, any phrasal projection below TP can constitute a fragment –even a vP, as shown above. In fact, (30) also allows for a sentential answer (*Avisará a la decana*), reproducing the tense information of the preceding interrogative. The different grammatical status of both becomes evident when inserted into a pseudo-cleft construction:

(31) Lo que hará el rector {es/ será} avisar/\*avisará a la decana.

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<sup>6</sup> This argument, however, has to be qualified. As Vicente (2006) notes, negative answers are possible in dialogue contexts: RENATA: [...] *El número trece trae mala suerte.*/ MALVINA: *No a toda la gente* (Emilio Carballido, *Las cartas de Mozart*).

The contrast derives from the fact that only subsentential constituents can function as a focus in a pseudo-cleft construction, thus the full sentence *Avisará a la decana* with a null pronominal subject is out in (31).<sup>7</sup>

From the point of view of interpretation, fragments have propositional content, in spite of their apparent non-sentential nature. When they are argumental, they are interpreted as related to a predicate, receiving the relevant theta-roles, as well as other grammatical indices, such as the accusative preposition *a*, illustrated in (32).

(32) Q: –¿A quién avisará el rector?                      A: –A la decana.

The accusative preposition is obligatory, even though the interrogative element in the question also contains this marking. These facts support a sentential approach to fragment answers, since they behave as if occurring within a sentential context. Morgan (1973) and Hankamer (1979), for example, propose a sentential approach in which fragments result from in-situ deletion of all the constituents that are void of phonetic content. Thus, (31) would be: [<sub>TP</sub> ~~el rector avisará~~ a la decana ].

One important problem for such a view is that the elements that are covertly realized do not need to form a unitary constituent of the clause. This situation clashes with the standard view that syntactic processes are constituent-governed. In order to circumvent this problem, Merchant (2004) proposes what is at present the standard sentential analysis for fragments. Establishing a parallelism between these constructions and sluicing and relying on the fact that fragments have focal content in the discourse, this author analyzes fragments as sentential constituents that undergo right movement to the specifier of a Focus projection (FP), placed immediately above CP. Moreover, a feature E in C° determines the covert realization of all the material contained in the

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<sup>7</sup> In colloquial registers of Spanish, it would be possible to rescue the ungrammatical version of (30) if a complementizer precedes the focus constituent, converting it into a CP. The following example corresponds to an oral interview in Venezuela: *Mi mamá lo que hizo fue que le puso adhesivo ahí*. The complementizer, being a subordinator, allows the clausal CP to function as a focus of a pseudo-cleft.

complement of this head.<sup>8</sup> The obvious advantage of Merchant's analysis is that it adequately reflects the focal nature of fragments and avoids the problem of considering these constructions free of the usual constituency constraints.<sup>9</sup>

Not all fragments are linked to a discourse antecedent, nevertheless. There also exist deictically dependent fragments, whose interpretation is based on the extralinguistic situation. This is the case of discourse-initial fragments. In order to accommodate them in his model, Merchant (2004) proposes the existence of linguistic pro-forms present in the corresponding syntactic representation that are covertly realized and that can be pragmatically recovered when they represent an entity or action that is perceptually salient in the speech situation. Merchant's proposal has the virtue of accommodating fragments into the usual syntactic processes in a plausible way, but it is not void of problems, both empirical and theoretical as noted in Valmala (2007). Maybe the most remarkable is the fact that the movement analysis that Merchant proposes for fragments is equivalent to focus fronting, an operation restricted to contrastive focus and not available in contexts of information focus.<sup>10</sup> Nevertheless, although fragments can have contrastive import, they do not require it. Finally, it is interesting to note that fragments seem more related to pseudo-cleft than to contrastive focus constructions: *Lo que hará el rector es avisar a la decana* constitutes a perfect paraphrase of (32) and the same operation could be done with any other fragment.

## **2. The nature, licensing and interpretation of the gap**

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<sup>8</sup> The derivational mechanism that Merchant (2004) proposes for sluicing is similar, but not identical, to the one advocated for fragments. In sluicing, the *wh*-word is placed in the specifier of CP. This difference would account for the different behaviour of both constructions with respect to islands: fragments are sensitive to them, whereas sluicing permits extraction from inside an island.

<sup>9</sup> See Barton (1990), Ginzburg & Sag (2000) and Valmala (2007) for a non-ellipsis account of fragments. In fact, those that deny their elliptical status tend to avoid the use of the term 'fragment' (which invokes a partial realization of some more full-fledged entity) and prefer to call them non-sentential constituents.

<sup>10</sup> Information focus merely identifies the value of a variable among a list of potential candidates. On the contrary, contrastive focus presents the value of a variable as opposed to a concrete value previously present in the discourse context. The answer of a *wh*-interrogative is interpreted as information focus.

There is a wide range of different elliptical constructions, as outlined above. Although different in more than one way, each particular construction raises the same general questions about the nature, licensing and interpretation of the gaps resulting from the process of ellipsis. In this section, we briefly discuss the issues relevant to

1. The internal nature of the gap;
2. Its licensing conditions, and
3. The recovery of the semantic information contained in it.

### 2.1. The nature of the gap: deep and surface anaphora

Elliptical elements are phonetically void and interpretively contentful. Theoretically, there are different ways to analyze them. One is to not represent them syntactically; their interpretation would be obtained via semantic rules of a contextual nature (Ginzburg & Cooper, 2004). Although a possibility, it is commonly held that there are null categories in the syntax, thus, we do not pursue the semantic route here, nor its consequences for the grammar.

There are two different ways of employing null categories in the syntax. The first option—*the empty category analysis*—assumes that the covert unit is atomic, lacking any syntactically relevant internal structure, but is visible at the conceptual-intentional (C-I) interface. Its interpretation is a function of its antecedent, via a process identical to that of pronouns (Lobeck, 1995) or a semantic rule that copies the information from the antecedent at LF (Fiengo & May, 1994). The second option—*the deletion analysis*—assumes that the elliptical material is present in the syntax with its full lexical content and a deletion mechanism activates its non-pronunciation at the articulatory-perceptual (A-P) interface (Merchant, 2001; Johnson, 2001). In the history of generative grammar, both analyses have been extensively argued for and evaluated. Therefore, the current

approach to elliptical phenomena tends to be non-unitary, a situation that is reflected in the very title of this chapter: whereas argument ellipsis is dealt with using pronominal empty categories like *pro* and PRO, the analysis of verbal ellipsis is frequently based on the idea that the lexically overt material is merged in the syntactic derivation and its non-pronunciation is due to some mechanism that is activated at the A-P interface.

A twofold approach to ellipsis phenomena was first advocated by Hankamer & Sag (1976), a seminal work that classifies all anaphoric constructions (both overt and covert) into two different groups: deep anaphora and surface anaphora. The distinction derives from several tests that are reflected in (33):

(33)

	<i>Deep anaphora</i>	<i>Surface anaphora</i>
a. Syntactically, is it an atomic entity?	Yes	No
b. Can it be deictically controlled?	Yes	No
c. Are missing antecedents allowed?	No	Yes
d. Does it require syntactic parallelism?	No	Yes
e. Is extraction from inside the anaphoric site possible?	No	Yes

Deep anaphors are syntactically atomic and their interpretation is obtained from semantic rules establishing an anaphoric or deictic relation with other entities present in the discourse or in the situational context. Personal pronouns are paradigmatic of deep anaphora. Hankamer & Sag (1976) also include certain verbal and nominal proforms, as well as one elliptical construction: null complement anaphora. In contrast, surface anaphora is syntactically complex, possessing full-fledged structure, although opaque due to its covert realization. For reasons of space, we cannot analyze in detail all the tests included in (33), which have been subject to a rather large debate in the literature. See Depiante (2000) for a detailed study in support of Hankamer & Sag's distinction, and Saab (2008) for a critical summary of the arguments adduced in the debate. In the remainder of this section, we will briefly comment on (33b, c).

The interpretation of deep anaphora can be pragmatically oriented by means of deixis, as opposed to surface anaphora, which only permits an anaphoric interpretation. The examples in (34) reflect this contrast, where # stands for pragmatic inadequacy:

(34) a. [Speaker is trying to open door]

-No puedo.

b. [Speaker is looking for lost document]

-#No sé            dónde.

Some linguists have argued that pragmatic control is not impossible in gapping, especially in highly conventionalized situations. So, for instance, an utterance like *Yo una caña* could be an order addressed to a waiter. Nevertheless, in general, deictic resolution is far more difficult in surface than in deep anaphora constructions.

Now consider (35c), which deals with missing antecedents (Grinder & Postal, 1971), i.e. antecedents not overtly realized in the discourse, as in (35):

(35) Luis no ha estado en ningún país asiático, pero María sí ~~ha estado en un país asiático~~ y *pro* le encantó.

Obviously, the antecedent of *pro* in (35) cannot be *ningún país asiático*, but the covert argument contained in the elided TP. If the TP were atomic, anaphorically referring to one of its subcomponents would be a mystery.

With respect to this test, TP-ellipsis and NCA go in opposite directions, as shown by (36), from Saab (2008: 54):

(36) a. ?? Pablo no pudo encontrar ningún libro, pero yo sí pude ~~encontrar un libro~~ y me gustó leerlo.

b. Pablo no pudo encontrar ningún libro, pero yo sí ~~pude encontrar un libro~~ y me gustó leerlo.

As a construction pertaining to the class of deep anaphora, NCA do not accept missing antecedents, as opposed to TP-ellipsis, an instance of surface anaphora.

## 2.2. The licensing of the gap

In general, for the operation of ellipsis to be licensed some local structural recoverability conditions must be met in order for the gap to be detected. In fact, these conditions derive directly from X-bar theory principles. So, for instance, the occurrence of a complement or an adjunct inside a VP implies the presence of the corresponding verb, since heads are structurally obligatory, contrasting with complements and specifiers. This is the situation with respect to gapping, as noted in §1.2.1. The presence of a VP remnant is crucial for its licensing. Likewise, for TP-ellipsis in Spanish, the presence of a polarity adverb is required for its licensing, as discussed §1.2.2.

Another strategy for licensing elliptical constituents derives from the close relation between certain functional categories and the lexical projections that they are related to. So, for instance, determiners and quantifiers take NPs as lexical projections, polarity heads select TPs, and modal and aspectual verbs take a VP in the lower structure. These functional elements can license ellipsis:

(37) a. Le gustaban los grabados y compró *dos grabados* de artistas italianos

b. Luis aceptó la propuesta, pero María *no aceptó la propuesta*

Finally, a third mechanism of local recoverability relates to the presence of the gap's phi-features in the sentence, as occurs in null subject constructions. The tensed verbal form shows the person and number features of the subject only. Thus, we expect that only the subject can be elided.

(38) \*María solicitó el puesto y yo entrevisté *pro*

Note also that it has been implemented in various forms that clitic pronouns, affixed to the verb with the corresponding phi-features, are licensers of an empty pronominal that represents the internal argument (Jaeggli 1982), illustrated in (39).

(39) María solicitó el puesto y yo la entrevisté *pro*

### 2.3. The interpretation of the gap

The lack of phonetic content inhibits elliptical constituents from functioning as focus or contrastive elements in the information structure of the sentence (Merchant, 2001). Therefore, a question like *¿Quién ha hecho eso?* can be answered with *He sido yo* or just with *Yo*, but not with a null subject (*\*He sido*), as it is the informative focus of the sentence here. The same holds when its function is a contrastive topic.

With respect to recovering the semantic information, the covert lexical information of a gap must be accessible in the discourse or situational context, as in (40), where the elliptical element is interpreted in function of its antecedent in the first coordinate conjunct:

(40) Juan trajo un pastel y María ~~trajo~~ unos chocolates

In (40) the pronominal features of the covert subject are recovered from the finite verb, which carries number and person information, as well as from the discourse context itself, which must make available the gender information not provided by the verb.

(41) ~~Ella~~ salió de la habitación sigilosamente.

There also exist covert elements that are interpreted cataphorically, such that the element that fixes the interpretation of the gap appears after it:

(42) Si puedes ~~traerlo~~, tráelo.

In all the previous examples, the interpretation of the elliptical element is carried out via the discourse. In other cases, the process is deictic: there is some element in the situational context in which the sentence is produced that fixes the content of phonetically empty element.

- (43) - Tú no preguntes. ¡Y tú ven aquí!  
 - Yo voy allí.

(Demetrio Aguilera Malta, *Una pelota, un sueño y diez centavos*).

In the dialogue in (43), the null subjects denote the participants in the speech act (hearer and speaker, respectively). On the other hand, the complement that determines the goal of motion for the verbs *venir* and *ir* is also interpreted deictically: *venir* expresses motion that converges with the position of speaker and *ir* motion that diverges with respect to this same reference point. When the referent of the elliptical category cannot be recovered anaphorically or deictically, the empty pronominal receives a non-specific interpretation, illustrated in (44). This also holds for impersonal and passive *se* sentences in Spanish.

- (44) *pro* llaman a la puerta

Finally, when the elliptical element does not have any interpretive import, as in (45), its presence is due to strictly structural principles.

- (45) *pro* nevó intensamente

2.3.1 In some cases, the elliptical constituent does not contain the same grammatical features as its antecedent. There is only partial identity, illustrated in (46).

- (46)a. Julián es sincero, pero María no ~~es sincera~~.  
 b. Andrea ha estado en México una vez y yo ~~he estado en México~~ dos veces

In (46a), the antecedent and the elided constituent diverge with respect to the gender feature of the adjective. In (46b), the verbal forms have different values for person, and the number features of the QPs are also distinct. In spite of these divergences, ellipsis is also possible. Nevertheless, mismatch of these same grammatical features is not always acceptable under ellipsis, as the contrasts in (47) show:

(47)a. \*El gato de Alicia y la ~~gata~~ de Luisa son de la misma raza.

b. El gato de Alicia y los ~~gatos~~ de Luisa son de la misma raza.

When the elliptical element is a noun, the number of the antecedent can differ from that of the elided nominal (47b); in contrast, gender must be the same (47a). Note that this contrast is not found when the antecedent is an adjective. In such a case, both phi-features can diverge: *Julián es sincero, pero tus amigas no ~~son sinceras~~*.

This asymmetry is reminiscent of the opposition between interpretable and uninterpretable features proposed in Chomsky (1995), although not identical to it. On the one hand, uninterpretable features, which are licensed by means of an agreement relation with an interpretable feature, do not have to be licensed for ellipsis to take place. However, considering interpretable features, (47b) shows that strict number identity with the antecedent is not obligatory for a noun to be elided; this contrasts with gender information, which does require strict identity for ellipsis.

A promising approach to this contrast is to elaborate on the different natures of gender and number on nouns. As has been remarked in the literature (Ritter, 1991), whereas number is a purely syntactic category, gender is part of the lexical information of nouns as an inherent property, possibly as a word-marker (Bernstein, 1993). The difference between both categories with respect to partial identity in ellipsis, then, seems to be rooted in the fact that gender is a non-interpretable feature, as proposed in Alexiadou, Haegeman & Stavrou (2007: 239). The non-syntactic nature of gender is

also the key to explaining this asymmetry in Saab (2008), who provides a thorough analysis of partial identity in ellipsis using the framework of Distributed Morphology (Embick & Noyer, 2001).

Consider the behaviour of tense features with respect to partial identity. As the examples in (48) show, the tense information of an elliptical verb, in contrast to person features, cannot be different from its antecedent's:

(48) a. \*Antonio viajó ayer y yo ~~vía~~aré mañana.

b. Antonio viaja hoy y yo ~~vía~~o mañana.

This contrast can be directly derived from the fact that tense features are interpretable on the verb and consequently they must fulfill a requirement of strict identity in ellipsis, while person features are attached to it via agreement with the subject, so they are uninterpretable and compatible with partial identity. The fact that (48b) is well-formed, in spite of the different temporal nature of the time adverbs, indicates that the constraints governing identity in ellipsis are purely formal: the combination of present and future adverbs is possible because present tense admits a prospective or futurate reading (*Viajo mañana a París*), which allows compliance with the strict identity constraint regulating tense features.

Nevertheless, in comparative clauses it is possible to delete a verb with a tense different from the one corresponding to the antecedent:

(49) Ahora tiene más experiencia que ~~experiencia tenía~~ hace un año.

Not all linguists regard comparative clauses as elliptical (cf. Sáez del Álamo (1999), for instance), but the standard view since Bresnan (1973) is that they include covert elements (see Lechner (2004) and Brucart (2003) for a more updated discussion on this topic). If the latter view is endorsed, some additional factor is needed to explain the contrast between (49) and (48a). It is likely that the contrast is related to two factors: (a)

gapping occurs in coordination, whereas comparative deletion is related to a subordinate structure, and (b) the corresponding interpretations also differ from one another: a propositional event in gapping and a quantified magnitude in comparative ellipsis. Note indeed that the clause introduced by *que* in (49) is interpreted as “the degree of experience that (s)he had a year ago”.

2.3.2. The most extreme instances of non-identical antecedents are provided by cases of ellipsis in which the covert element includes a lexical unit that is different from the one functioning as its counterpart in the antecedent, as in (49):

(50) Luis se presentó a sí mismo al ver que el presidente de la sesión se olvidaba {~~de presentarse a sí mismo/de presentar a Luis~~}

Example (50) is ambiguous, as the reconstruction of the corresponding elliptical sites displays: they admit a *strict identity reading*, which reproduces the lexical material of the antecedent, and a *sloppy identity reading*, where the reconstructed material is different from the antecedent. These facts are referred to as *Vehicle Change Effects* by Fiengo & May (1994), who propose an LF coindexing mechanism of reconstruction that allows the elliptical site to include a pronominal token different from the corresponding counterpart in the antecedent if certain syntactic identity conditions are met. Accordingly, variables or R-expressions can be reconstructed with a pronominal correlate. Consequently, the sloppy reading of (50) is possible because there is a similar relation between the anaphor *sí mismo* and the pronominal clitic *lo*: *Luis se presentó a sí mismo al ver que el presidente de la sesión se olvidaba de presentarlo*, where the enclitic form *lo* is coreferential with *Luis*. See Merchant (2001) for an alternative proposal based on the contrast between focus and given information.

The process of ellipsis results in gaps in a sentence, gaps that are syntactically present, contribute to interpretation, yet have no phonetic realization. Understanding this phenomenon of natural language entails understanding the mechanisms of language that allow us to interpret the variety of empty elements that surface in syntax. The present overview is a first step toward such an understanding.

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