Gapping-zeugma in French and English: a non deletion analysis

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"Gapping is ever problematical"

Jackendoff [22:193]

1. INTRODUCTION¹

The phenomenon called Gapping² in generative grammar is attested in the following type of sentences

[1] John reads a book and Mary a magazine. Jean écrit un livre et Marie un article.

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² This term, due to Ross [45] attests some unfamiliarity with both ancient rhetorical and classical grammatical tradition which classified it under the name of *zeugma*. Only Banfield [1:1] has established the evident relationship between the terms Gapping and *zeugma*. Sometimes, this tradition also includes problems referred to nowadays as conjunction reduction under the general *figura* of *zeugma*, which always refers to a coordinate structure. More commonly however, as Lausberg [29:105] remarks, rhetorical and grammatical tradition consider *zeugma* in a more restricted sense as the same case as Gapping. In a still more restricted sense, the rhetorical term of *zeugma* is used for stylistically unacceptable coordinations including idioms.

?John was keeping tabs on his sister and a collection of houseflies in the kitchen.

- J'aimais, j'étais aimé et nos pères d'accord.
- (Corneille)

Within the generative framework of the early seventies, Tai [53], Eckmann [8], and Koutsoudas [24] tried to reduce the problems of Gapping, right-node-raising of the type

Jean reads, and Mary writes, an article.

and conjunction reduction to one general rule. Traditional and modern currents seem to converge in their efforts to treat these questions as a whole, apparently lumping together linguistic and logical analysis (See Dik [4] and Gazdar [10:406] on this subject). Doughterty [5][6] has shown in a particularly convincing way why coordination on the one hand and problems as Gapping and RNR on the other are quite separate phenomena: whereas the former respects constituent boundaries, the latter does not (Dougherty [5:891–892]). Nevertheless, as far as Gapping is concerned, a certain type of example

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It may seem rather surprising that several analyses³ within generative grammar in the last decade have not succeeded in stating a coherent rule of deletion for an apparently simple case like Gapping, which would include all possible examples

These analyses share the characteristic which Newmeyer [42] has pointed out to be essential for generative work in the seventies, constraining the rules, *in casu* a rule of deletion. This paper attempts to show that no deletion rule is necessary to account for the phenomenon of Gapping. Our aim is also to recapture certain insights of rhetorical and grammatical tradition and to discuss a number of examples for which generative work hasn't offered a solution.

2. CHARACTERISTICS

In our description of Gapping-zeugma, we will present a critical synthesis of its characteristics as proposed in earlier literature on the subject, familiarity with which will be assumed For the sake of simplicity, we will continue to use the terms "delete" or "gap", although this does not imply that we regard deletion as the mechanism responsible for the phenomenon

2.1. Nonrepetition in Sentence Coordination

2.1.1. Types of Linking for Grapped Constructions

The phenomenon of Gapping is restricted to nonrepetition of maximal constituents (2) and nonmaximal constituents (1) mainly in coordinate and comparative (3) structures.⁴

He realized he could make more money in some other position than he can farming Harry ate more peaches than Billy did grapes

Although a slight modification of our analysis would possibly allow for Pseudo-gapping,

respect constituent boundaries (cfr 2 1 (2) and (10) The same argument had been used by Chomsky [2 35] to justify constituent structure. We will not accept a single rule of Coordinate deletion that derives all coordinated structures, as proposed most recently by Van Oirsouw [55]

³ Ross [46], Jackendoff [21], Hankamer [15][16], Stillings [51], Langendoen [27], Hudson [18][19], Kuno [25], Sag [47], Neijt [40], Banfield [1] See also Williams [57], Koster [23] and Wasow [56] for brief sketches of interpretive rules for Gapping

⁴ See Napoli [38] for discussion in the literature as to the inclusion of this kind of example to Gapping. The present analysis does not include the phenomenon of Pseudo-gapping, (Levin [32]) which involves the repetition of auxiliaries mainly in comparative gapped clauses

- (1) John reads a book and Mary a magazine. Jean écrit un livre et Marie un article.
- (2) John writes an article in his office, and Mary in the basement. Jean écrit un article dans son bureau, et Marie dans la cave.
- (3) He wore his Spanish cape as a Roman his gown.Il portait sa cape espagnole comme un Romain sa toge.

The number of coordinating conjunctions is limited; *and*, *or*, *nor* and juxtaposition are admitted, *but* is excluded by the majority of speakers according to Sag [47:191] but not according to Jackendoff [21:22]

(4) ?John gives flowers, but Peter sweets.?Jean donne des fleurs, mais Pierre des bonbons.

However, the relative inacceptability of *but* in coordinate sentences is due to the semantic content of the conjunction: use of *but* in coordination requires that what follows would be "abnormal" or opposed to what can be expected in the speakers' universe in relation to the first part of the coordination. When informants do not accept a sentence such as

(5) ??John loves Mary, but Harry Jane. Sag [47:191] ??Jean aime Marie, mais Louis Jeanine.

it is partly because there is no oppositive structure between the two parts of the coordination. Consider the acceptability⁵ of

(6) John plays well, but Peter much too slowly. Jean joue bien, mais Pierre trop lentement.

we will not pursue the question here. This possibility also exists in Classical French, but is limited to the pro-form *faire* in comparative clauses (Damourette-Pichon [3:§1673]).

"... la portant en son sein comme une mère fait son petit enfant." (St. François de Sales, *Introduction à la vie dévote*, p. LXX, quoted by Damourette-Pichon, ibid.)

⁵ Consider also the classical Latin *dictum*, which is unacceptable in English.

(i) "Causa victrix deis placuit, sed victa Catoni."
 ?*The winner's case pleased the gods, but the loser's [case pleased] Cato.

But apparently we have to accept in English

(ii) "(...) a filter preventing successive infinitives in Italian is blocked by an intervening Wh-trace but not an intervening NP-trace." Chomsky, Lectures on Government and Binding, p. 182

Gapping can also apply across utterances.

(7) Speaker A: John gives flowers.
Speaker B: and Peter sweets.
(Hankamer and Sag [16:410], Sag [47:192] Neijt [40:37-38])

2.1.2. Structural Identity

The constituents left behind to the right of the gap in the second clause of the coordinated structure have to belong to the same type of constituent as those that are found in the first clause. This means that these constituents have to represent the same structural condition: they must belong to the same functional category. This explains the impossibility of

- (8) *John eats at Maxim's and Peter a piece of chocolate.
- (9) *John eats at noon and Peter at home.
 *Jean mange à midi et Pierre à la maison.
 Hankamer [14:23] Stillings [51:251] Sag [47:192-193]

This general constraint on coordination raises the problem of the kind of elements which can be coordinated. Schachter [48:90] proposes the Coordinate Constituent Constraint which stipulates that coordinated constituents have to be a part of the same syntactic and semantic category. The same constraint applies to the parallel remnants of sentences with Gapping. Neijt [40:32-37] observes that the CCC only reformulates the problem, but the studies she quotes (Williams, [58]) hardly offer a solution for the problems. Peterson [44:449] remarks that identity of syntactic category is neither a necessary nor sufficient condition for coordination, because nonidentical constituents can be coordinated and not all identical constituents can be coordinated. The necessary condition he proposes requires the functional equivalence of the constituents. This is nothing but a reformulation of Dik's definition [4:25]. Gazdar [10:408–409] describes coordination on a semantic level in terms of Montague grammar as an intersection of properties included in the coordinated elements in reference to the term that "dominates" the coordination. But, still, how is the acceptability of (9) and of the following examples to be accounted for?

- (10) a. John eats at noon and at home.
 - b. *?John eats at home and at noon.

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- (11) a. Jean mange à midi et à la maison.b. *?Jean mange à la maison et à midi.
- (12) a. Elle a trente ans et deux enfants.b. *?Elle a deux enfants et trente ans.

This paper will not present a solution to this question, because acceptability of Gapping does not depend on this characteristic in the first place. Crucially, in these examples only (a) makes sense because of some kind of a topic-comment relation of the coordinating elements (Melis [36]). As for Gapping, we will require, however, that the paired elements belong to the same functional class, as well as to the same semantic class. Paired elements have only to be compatible for the hearer. Phenomena as in (10) (11) (12) do not seem to occur. For the phenomenon of Gapping, not for coordination in general, this seems to suffice.

2.2. Domains of Gapping

In classical French, Gapping is not limited to coordinate sentences, as it seems to be in English according to Jackendoff [21:22]. Sometimes it is applied to an embedded domain (13), or it even occurs starting from a relative clause as in (14).⁶

- (13) "Il est vray qu'ayant disposé de mon affection avant que mon père de moy . . ." (H. d'Urfé l'Astrée).
- (14) "Il s'acquit une considération très marquée de la part du Roi et de ses ministres, qui tous le regrettèrent, et son diocèse infiniment." (Saint-Simon, Mémoires).
 (Examples from Damourette and Pichon [3:289-290] italics mine.)

⁶ In Classical Latin and in French even larger possibilities seem to exist which cross sentence boundaries (i,ii). They cannot be reduced to type (iii) sentences, which are to be considered as coordinated gapped structures.

- (i) "Num quid igitur alium in iudicium venit nisi uter utri insidias fecerit? Profecto nihil: si hic illi, ut ne sit impune; si ille huic, tum nos scelere solvamur." Cicero, *Pro Milone* XII §31, 12–14
 "Is there, then, any other question before the court than this: which of the two plotted the other? Obviously none: if my client [plotted against] Clodius, let him not go impunished; if Clodius against Milo, let us be acquitted." (Transl. N. H. Watts, *Cicero, the speeches* p. 41, brackets mine)
- (ii) "Nous étions ivres d'amour l'un et l'autre, elle pour son amant, moi pour elle;"
 (J. J. Rousseau, Les Confessions, GF t.II, p. 200)
- (iii) Je me mets à lui raconter ma vie. Lui, la sienne.

Gapping is possible in coordinate embedded domains.

 (15) John said that Mary went to the opera, and Louise to the movies. Jean m'a confirmé que Marie allait au théâtre et Louise au cinéma.
 (Sag [47:267]; Stillings [51:256])

Only the highest S node in coordinate structures can undergo Gapping. Consequently, it is impossible to delete verbs in the rightmost clause appearing in an embedded domain of that clause. This characteristic is called "downward boundedness" of Gapping.

- (16) *John gives flowers and $\begin{cases}
 I know that \\
 it seems that \\
 Mary knows a person pretending that
 \end{cases}$ Peter sweets
- (17) *John said to Mary that Peter was worth being elected Congressman and Ann agreed with Paul that Louise senator.
 *Jean disait à Marie que Pierre méritait d'être nommé directeur, et Marie était d'accord avec Paul que Louise sénateur. (Hankamer [14:20]; Sag [47:190]; Stillings [51:248-249]; Ross [45:356a])

2.3. MODALITIES AND THE GAP

The gap always has to include the verb. Of course this has consequences for modalities.

2.3.1. Auxiliaries

It is impossible to delete the verb in the second clause of the coordinate structure, if other constituents appear between the subject-NP and the deleted verb. Gapping cannot take place if an auxiliary conjoined to the verb is changed or dissociated.

(18) *John $\begin{cases} wants to \\ will \end{cases}$ give flowers and

The tensed verb must always be deleted in the gapped clause. An identical infinitive following the verb can also be deleted.

(19) John wants to buy flowers and Peter [wants to buy] sweets Jean doit acheter des fleurs et Pierre [doit acheter] des bonbons.

2.3.2. Adverbs

Adverbs qualifying the verb cannot be unlike, and are also necessarily deleted along with the verb.

- (20) *John sometimes beats his wife, and Peter frequently his dog. *Jean mange parfois des oeufs et Pierre souvent de la viande.
- John reads his paper carefully and Peter his magazine ([reads carefully] deleted)
 Jean lit soigneusement le journal et Pierre le magazine ([lit soigneusement] deleted)
- (22) *Simon quickly dropped the gold and Jack suddenly the diamonds.
 *Simon laissait vite tomber l'or et Jacques tout à coup les diamants.
 (Jackendoff [21:23]; Hankamer [14:103]; Sag [47:196]; Van Oirsouw [55:310])

The impossibility of [20], however, seems rather due to the fact that the first adverb doesn't imply the second. Since *frequently* implies *sometimes*, [23] is more acceptable.

(23) John frequently beats his wife, and Peter sometimes his dog. Jean mange souvent des oeufs et Pierre parfois de la viande.

Consider also

- John will surely obtain that job and Peter perhaps that permission.
 Jean obtiendra certainement ce travail et Pierre peut-être cette permission.
- (25) ?John will perhaps obtain that job and Peter surely that permission.?Jean obtiendra peut-être ce travail et Pierre certainement cette permission.

But with emphatic stress on the adverbs, this last example also appears to be acceptable. It is possible that the functions of the adverbs intervene here. Example (22) isn't acceptable because *quickly* and *suddenly* do not belong to the same functional class; Clefting isn't equally possible for both adverbs.

2.4. The Verb and its Complements

Identical NP or PP next to the verb can be deleted if followed by a constituent.

(26) John writes poetry in the garden and Mary in the bathroom. Jean lit un roman dans le jardin et Marie dans la cave

If the NP or PP is followed by V inf., deletion of the following kind is not acceptable.

 (27) John wants Mary to buy bread and Peter *[wants Mary] to prepare sliced eggs.
 Jean envoie Marie chercher du pain et Pierre *[envoie Marie] cuire un oeuf.

An interpretation as in 2.2.2. remains possible.

If the verbal complement is an infinitive (with a complement) immediately following the verb deletion of the verb is possible. (28) John tried to wash himself and Mary to read the newspaper. Jean essayait de préparer le diner et Marie de mettre la table. (Jackendoff [21:24])

It is possible to delete a string of embedded infinitives if there is one unlike constituent that remains. (Jackendoff [21:25])

(29) John seemed to be trying to begin to buy flowers and Peter sweets.Jean semblait vouloir commencer à acheter des fleurs et Pierre une plante.

An additional requirement Stillings [51:248] stipulates is that these infinitives must be contiguous because of the unacceptability of

(30) *Dizzy persuaded Bird to go to L.A. and Fletcher, Louis, to Chicago.
*Oscar intended to order Sally to sing a song and Sasha Wilfred.
*Jean avait l'intention d'ordonner à Marie de partir pour la Suisse et Jacques Julie.

This seems to be an unjustified requirement, because of the sentence adduced by Jackendoff [21:25]

(31) Max seemed to be trying to force Ted to leave the room and Walt(,) Ira.Jean semblait vouloir forcer Pierre à sortir, et Marie Jules.

As remarks Jackendoff [21:25], the constraint noted in 2.4.2. seems to apply here too; if in the string of embedded infinitival complements there is one of the type NP-VP inf. only NP can remain.

(32) Max seemed to be trying to force Ted to leave the room and Walt *[seemed to be trying to force Ted] to stay a little longer. Jean semblait vouloir forcer Pierre à sortir et Marie *[semblait vouloir forcer Pierre] à rester. This characteristic is called multiple target deletion by Neijt [40]. Gapping can delete noncontiguous parts of coordinated clauses. (Sag [47:223]; Neijt [40:22])

(33) Jack begged Elsie to get married and Wilfred [begged] Phoebe [to get married] Jean envoyait Louise chercher le courrier et Jules [envoyait] Marie [chercher le courrier].

2.5. MAJOR CONSTITUENCY

The constituents left behind in the second clause of the coordinate structure always constitute major constituents. Several constraints have been proposed in order to limit the application of Gapping so as not to delete parts of major constituents: Head Condition, several versions of the A-over-A principle (e.g. the Immediate Domination Principle of Sag [47:237] and the Major Constituent Condition of Hankamer [15:18]. Neijt [40:110–128], [41:74–76] discusses these constraints and adduces several arguments to support Hankamer's MCC: "A 'major constituent' of a given sentence S_0 is a constituent either immediately dominated by S_0 or immediately dominated by VP which is immediately dominated by S_0 " (Hankamer [15:18]).

(34) John writes with a pencil and Akira [writes] with a brush *[writes with] a brush *[writes with a] brush Nous mangeons avec des couverts et Akira [mange] avec des baguettes *[mange avec] des baguettes *[mange avec des] baguettes

2.6. LIMITS ON GAPPED SENTENCES

The number of constituents left behind in the second clause of the coordinate structure seems limited. Stillings [51:249] allows in the position to the right of the gap only one constituent. She thus rejects sentences of the type

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(35) *John gave Mary flowers and Peter Louise sweets.

Neijt seems to range herself on the side of Stillings [51] by the formulation of her rule which apparently only admits two remnant constituents. (Neijt [40:95])

 $W_1 \quad A \quad W_2 \quad B \quad W_3 \Rightarrow \emptyset \quad A \quad \emptyset \quad B \quad \emptyset$

Still, the final version of her rule is "Delete", and this enables Neijt to admit more remnants or gaps if necessary, because their number can not be defined *a priori*.⁷ Sentences with three constituents left behind are perfectly acceptable to Sag [47:220]. Jackendoff [21:29] notes that their acceptability varies: if there is a string NP-PP, sentences with verb deletion are rather unacceptable if the PP is strictly subcategorized by the verb. (Jackendoff [21:26])

- (36) ?*John put the flowers in a vase and Peter the book on the table.
- (37) ?John writes poetry in the garden and Mary pamphlets in the bathroom.

Sentences with more than two remnants seem to cause more problems in English than in French, where sentences with three remnants are perfectly grammatical. Damourette and Pichon [3:276] quote the following example

(38) Louis m'a mené au théâtre et Paul Georgette au cirque.

as an example of *zeugme* in French.

It seems that relative acceptability of these sentences in English, and their higher acceptability in French could be due to the fact that the parallelism of syntactic functions is more clearly defined in French than in English. In the following sentences the "cases" are, so to say, better marked. Compare

(39) *?John gave Mary flowers and Peter Ann sweets.Jean donnait des fleurs à Marie et Pierre des bonbons à Anne.

⁷ Neijt, personal communication.

If the corresponding type of sentences is less acceptable for English informants, it could be due to the fact that it is more difficult to "recognize" the grammatical functions in the second clause of the English sentence. This "recognition" takes place in the natural analysis of the hearer (parsing). This hypothesis is supported by the observation that this kind of sentences will be accepted more easily if the clear functional parallelism is restored.

(40) John gave Mary flowers John gave flowers to Mary and Peter sweets to Ann.

Compare also in footnote (6i) the Latin example (with clear casemarking) with its unacceptable English translation (without overt casemarking).

2.7. DIRECTIONALITY OF GAPPING

Backwards Gapping does not seem to exist in English.

(41) *?John flowers, and Peter gives sweets.
 (Sag [47:191]; Hankamer [14:45]; Ross [45:251]; Maling [33:103]

For French however, Damourette and Pichon distinguish between *zeugmes antérieurs* (Backwards Gapping) and *zeugmes postérieurs* (Forwards Gapping). As an example of Backwards Gapping they cite

- (42) "Ceux qui, tel un bonneteur ses cartes, étalent tout leur jeu . . ."
 (G. Duhamel, Scènes de la vie future)
 (Damourette and Pichon [3:278])
- 2.8. **Recursivity of Gapping**

Gapping can apply recursively. (Ross [45:355])

(43) John gives flowers, Peter sweets, Mary a book and Louise a record.Jean donne des fleurs, Pierre un livre, Marie des bonbons et Louise un disque.

but it is not linearly recursive. (Sag [47:193])

(44) *John wanted Peter to persuade Mary to see Louise, and Mark, Harry, Sophie, Julie.
*Jean voulait persuader Pierre de convaincre Marie de voir Paul, et Marc, Luc, Sophie, Jules.

Ross [45:97] speaks of an across the board application of the rule.

2.9. NEGATION

Negation does not apply to the deleted part, but has to be repeated by the negative conjunctions *nor*, *neither*.

(45) *John doesn't give flowers and Peter sweets John doesn't give flowers nor Peter sweets.
*Jean ne donne pas de fleurs et Marie des bonbons Jean ne donne pas de fleurs ni Marie des bonbons.
(Ross [46:250]; Jackendoff [21:23]; Sag [47:195]; Stillings [51:255]; Neijt [40:65-66])

This constraint could be extended to the adverbs implying a high degree of negation.

 (46) *John hardly completed his book, and Peter his article.
 *?Jean a à peine achevé son livre, et Pierre son article. John only completed his book, and Peter his article. Jean a seulement achevé son livre, et Pierre son article.

But even for this rather straightforward characteristic acceptability varies.

(47) John didn't give flowers to Mary and sweets to Ann.Jean ne donne pas de fleurs à Marie et des bonbons à Anne.

For the French example, the conjunct ni improves the sentence. It seems, however, that in these examples the scope of negation is easily carried over into the second conjunct, because there is no subject to block it. Normally, negation only applies to predicates, so in (47) it does not have to be repeated, because the gapped clause consists of material belonging to a predicate. (cfr note 14) Nevertheless, wide scope interpretation of negation remains possible in a certain number of cases. (Siegel [50])

- (48) Ward can't eat caviar and Sue, beans.
- (49) Oh no! Chris isn't in the den and the baby in the boiler room! Oh non! Jean n'ira pas chez McDonald's et Paul chez Maxim's!
- (50) Linda hasn't read her paper, nor/or/*and Richelle hers. Marie n'a pas relu son article, ni/*ou/*et Anne le sien.

Without discussing the validity of Siegel's [50] interpretive account for these sentences, one must note that (48) and (49) require heavy contrastive stress in order to be accepted, as well as a context which provides explicitly for the negation of the totality of the sentence. (e.g. *Oh no!* in (49)) This external negation, then, induces the wide scope reading of (48) and (49). Consider also that interpretation of these kinds of sentences is only possible in exclamative contexts of a negative wish or an impossibility. The acceptability of the conjunct *or* in (50) seems due to its semantics in English: as in *neither* . . . *nor, or* seems to be able to replace *nor* freely. Clearly, *or* is then used in its inclusive sense. In (45) and (46), this seems equally possible. (Stillings, [51:256–257])

2.10. INTONATION

According to Sag [47:192], the remnants are marked by a special intonation which is not fixed.

(51) John gives flowers and Peter sweets.

3. CRITICISM ON EARLIER APPROACHES

3.1. A DELETION TRANSFORMATION OF NON-CONSTITUENTS

A first criticism concerns the theoretical status of a rule of deletion operating on nonconstituents. The argument developed by Neijt to prove that deletion applies to non-constituents in the case of Gapping refers to the opposition between Gapping and VP-Deletion. It crucially depends on the assumption that infinitives are derived from an underlying embedded clause. This hypothesis encounters much opposition, and it seems it can't be maintained for French, at least for the verbs of movement (Gross [13:74–96]; Emonds [9:164]).

Generative grammar has a principle known as the Constituent Condition; a transformation only applies to constituents. According to Neijt [40], all authors agree that the Constituent Condition does not apply to deletion transformations, but it seems that there is no independent argumentation for this position. From the point of view of a strictly transformational theory, the phenomenon of Gapping could be excluded from transformations (See also fn. 10). Moreover, there is another argument to exclude Gapping from a purely syntactic treatment along the lines of Ross [46]. The syntactic hypothesis starts from the idea that the verb, and potentially some complements, are deleted in the second clause. Tense, mood⁸ negation and sentence form (assertion, question, order) have to remain constant. If a purely syntactic rule is accepted, the verbal form has to be strictly identical in the second clause. Since person and number can be changed, a syntactic rule does not work without *ad hoc* constraints.

- (52) Paul has read a book and you an article.Paul a donné des fleurs, et moi des bonbons.
- (53) Londres est libre, et vos lois florissantes (*Henriade* 2,41) London is free, and your laws flourishing.

All approaches trying to incorporate Gapping into syntax are forced to invoke the identity on the level of logical form (Sag [47:§2.1] as a criterion assuring recoverability. Actually, logical form only neutralizes person and number agreement, so as to make the two verbs coincide formally and make deletion possible. But in fact, a deletion analysis is not able to account for certain modalities and negation (2.6, 2.7). For a transformational approach, sentence (20) is not possible because of the coexistence of two contrary adverbs in one clause.

(20) *John sometimes beats his wife, and Peter [beats sometimes] frequently his dog.

But why then is (23) acceptable to most informants, if we do not consider the fact that gapped clauses with three remnants are somewhat awkward in English? The example is perfectly acceptable in French. (examples repeated for convenience)

(23) John frequently beats his wife, and Peter sometimes his dog. Jean frappe souvent sa femme, et Pierre parfois son chien.

 $^{^8}$ This refers to a *real* change of tense or mood, which is not due to fixed syntactic rules as in the following example from French, where Gapping applies to an embedded clause.

[&]quot;... ayant disposé de mon affection avant que mon père [ne disposât] de moy" (Cited by Damourette and Pichon, [3:289])

The objection to deletion also arises for negation. Without an *ad hoc* constraint, this analysis is not able to explain why negation is not deleted along with the verb (cfr 2.9. (45)–(50) and Siegel [50]).

3.2. "*SO + SVO"?

A second remark concerns the implicit hypothesis of all approaches that Gapping operates only forwards. The structure SO + SVO does not exist in the languages known to Ross [46:251]. Sentences of the type (2.7 (41))

(54) *John an article and Mary reads a book *Jean un article et Marie lit un livre.

are impossible in every known language to Ross. This argument supports his hypothesis of the directionality of Gapping. If Backwards Gapping is a case of node raising as assumed Maling [33], Gapping only applies forwards.

SVO + SO	O SO +	SOV	node raising
SOV + S	0 *SO +	SVO	
VSO + S	0 *SO +	• VSO	

(Maling [33:101])

Damourette and Pichon, however, quote examples where Gapping (zeugme) operates backwards without node raising. Apart from cases of comparison (2.7. (42)) such as

(55) "Alors le bienveillant, comme le chulo le taureau avec sa cape, essayait de distraire son ami Ramon."
(Comte de Commingues, Les Blérancourt, quoted by Damourette-Pichon [3:290])

where one could say that a rule of replacement has applied after Gapping, there are other examples of *zeugme antérieur* impossible to explain by replacement and which have the structure SO + SVO:

(56) "Les uns, Wagner; les autres chérissaient Schumann."
(P. Valéry, Variété, Avant-propos, p. 98 cited by Damourette-Pichon [3:286]) Although the example is somewhat marginal and it belongs to written language, it is nevertheless possible and acceptable. Moreover, it is probably the result of a conscientious reflection on language. The possibility of producing these sentences is a property of language and should be explained in a theory of the phenomenon of Gapping.

Besides, Marouzeau [34] distinguishes three types of *zeugme* in his definition, according to the place of the verb:

"On le [le zeugme] qualifie parfois de *protozeugma* si le mot est exprimé dans la première construction: l'un prit le livre, un autre le cahier, un troisieme la plume, de mésozeugma, si le mot est exprimé dans la construction du milieu, de hypozeugma, s'il l'est dans la dernière."

(Marouzeau [34:243] see also Lausberg [29:348])

The sentence (56) is a counterexample to the Directionality Constraint of Ross [46] and to transformational rules assuming that Gapping only operates forwards⁹. Neijt's [40] rule could derive these sentences, since the final version of her transformation mentions only one clause of the coordination; the one that is submitted to deletion. However, no independent grammatical constraint suffices to limit backwards application of this rule that would also generate (54) and 2.7. (41).

3.3. GAPPING AND SENTENCE GRAMMAR

Neijt [40] offers three arguments in favour of an inclusion of a rule of Gapping to sentence grammar, all referring to the resemblance between the rules of WH-movement and Gapping. First, we have the (Complex) NP Constraint; no constituent dominated by NP can be taken out of that NP or deleted, by a transformation. Thus

(57) *About whom the stories frightened John?*A propos de qui les histoires faisaient-elles peur à Jean?

but still

(58) Of whom John has taken a picture? De qui Jean a-t-il pris une photo?

⁹ We reject also the approach of Banfield [1] though the second part of her article on Coordinate Deletion has not yet appeared. In the first part of her article, she invokes precisely the Directionality Constraint as a condition for her rule (Banfield [1:1 and 29]).

where PP is not dominated by NP but by VP (Neijt [40:135]). This counts also for Gapping.

(59) *The stories about Dracula frightened John and [the stories] about Frankenstein [frightened] Peter.
 *Les histoires à propos de Dracula faisaient peur à Jean et [les

histoires] à propos de Frankenstein [faisaient peur] à Pierre.

Neijt [40:136] gives several examples of Gapping where the head of the complex NP is deleted along with the verb as in (59)(60). Admittedly, these examples point out a similarity between WH-movement and Gapping, but examples where dominated NP or PP are deleted tend to prove the reverse (61)(62).

- (60) i. *John discussed the question of which flowers they saw and Bill which animals.
 - ii. *Which flowers they saw John discussed the question of?
- (61) i. John read the books about Einstein and Paul the articles.ii. *About whom did John read the books?
- (62) John lost a picture of his mother, and Paul a painting. *Of whom did John lose a picture?

One could agree that the interpretation of (61) and (62) with deletion of the dominated PP is not necessary. It seems, however, that this interpretation is possible and, moreover, that it is the most common when there is proper stress on the head-NP. The similarity noted by Neijt [40] between WH-movement and Gapping has to be reduced to the Complex NP constraint as proposed by Ross [45:70] in order to account for (60). However, even this is not possible; Neijt [40:136] gives herself an example that falsifies this position.

(63) John asked which flowers they saw and Bill which animals.

In order to prove the similarity between Gapping and WH-movement, she compares this sentence with a sentence where WH-movement has taken place.

(64) Which flowers did John believe that Peter saw?

But actually, these sentences cannot be compared, because (64) is to

be derived from (65), not from something like (66) that should be similar to the first clause of (63).

- (65) John believed that Peter saw those flowers.
- (66) *John besieved which flowers Peter saw.

(61) (62) and (63) must thus be seen as counterexamples to Neijt's claim of the similarity between Gapping and WH-movement with regard to the (Complex) NP Constraint.

The second constraint Neijt [40:137] advances to prove the resemblance between Gapping and WH-movement is the WH-Island Constraint stipulating that Wh-elements can be moved out of non tensed clauses if these clauses are not introduced by COMP:

(67) What did John want to cook today?

This constraint does not seem to apply in French, where tenseless sentences introduced by COMP are rather rare and idiomatic.

(68) Il se demandait que faire.

For English, this condition could be replaced by the Major Constituent Condition, if we do not accept the hypothesis that an infinitive or an infinitival construction is necessarily dominated by an S-node in deep structure when adjoined to the verb.

(69) *John wondered what to cook today and Peter tomorrow. John wanted to cook dinner today and Peter tomorrow.

The third constraint is the tensed S Condition: "no rule can involve X, Y in the structure $\ldots X \ldots [\alpha \ldots Y \ldots] \ldots$ (i) where Y is not in COMP and α is a tensed sentence" (Neijt [40:141]. For Gapping, the condition stipulates that: "tensed sentences cannot contain one of the remnants but not the other, unless the remnant contained in the tensed sentence is in COMP." In other words, if we delete in a sentence containing an embedded sentence, one of the remnants has to be in COMP.

(70) John may decide which girls are coming along and Mary which boys.

(71) *?John decided that twenty girls are coming along and Mary thirty boys.
 *Jean décide que vingt filles viendront et Marie trente garcons.

It seems that sentences without a remnant in COMP are more or less acceptable in French. These sentences are perfectly acceptable if the functions of the remnants are better marked. (cfr also fn. 20)

 (72) Jean décide qu'il fera comme Paul et Louise [décide qu'elle fera] comme Marie.
 Jean décide qu'il ne mangera que de la viande et Marie que des légumes.

But

(73) *Marie dit que Paul est malade et Henri Jean.

Moreover, French presents examples of Gapping in a tensed sentence.

(13) "Il est vray qu'ayant disposé de mon affection avant que mon père [n'eût disposé] de moy"...
(H. d'Urfé l'Astrée, cited by Damourette and Pichon [3:289])

The Tensed-S Condition cannot be replaced by the observation that Gapping can never operate over an embedded sentence. It seems that the phenomenon of Gapping violates here several grammatical constraints.¹⁰ The conditions formulated by Neijt [40] in order to restrain the phenomenon of Gapping, seem closely linked with the assumption that only coordinations of S, S', and VP are domains of Gapping. The quoted example shows that the phenomenon can also apply to subordinate clauses, and even passing from a subordinate clause to a coordinated sentence.

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¹⁰ I will not consider interpretive accounts of Gapping as proposed in Koster [23], Williams [57], or Wasow [56], although they also present criticism on deletion rules for the phenomenon. These analyses do not deal with the complex characteristics of Gapping, and only propose some version of a vague copying rule subject to some constraint of sentence grammar. Koster's [23:219] assumption that the Bounding Condition holds for Gapping is criticized by Neijt [40:164]. Wasow [56:116] treats Gapping as an anaphora rule, but he does not give any further analysis and notes that it constitutes an exception in that it is the only anaphoric relation that isn't bidirectional. (Wasow, [56:100]. Williams [57] relies on Wasow [56] and does not analyse the problem either. For criticism on deletion on the interpretive side, see Wasow [56:125]. All interpretive analyses consider Gapping as a rule of sentence grammar.

(14) "Il s'acquit une considération très marquée de la part du Roi et de ses ministres, qui tous le regrettèrent, *et son diocèse* [le regretta] infiniment."
(Saint-Simon, Mémoires, cited by Damourette and Pichon [3:289])

This sentence constitutes a problem for recoverability as defined by Sag [47] on the level of logical form. For Sag [47:\$2.1] and Neijt [40:97–107], recoverability is defined by the notion of alphabetic variation. Two utterances A and B containing variables in corresponding positions but identical for the rest, are alphabetic variants if all variables of A are bound in A in the same way as all variables of B in B. Every occurrence in A has to have a corresponding occurrence in B (Sag [47:104]; Neijt [40:100–101]). This is clearly not the case in the cited sentence where an adverb is included in B that is absent in A. The sentence is not an isolated one.

(74) John is going to publish an article and Peter *probably* a book. Jean va publier un article et Pierre un livre, *s'il en a le temps*.

3.4. Overgeneration

Neijt [40] justifies her highly overgenerating rule by the argument that in generative syntax, rules are not simple generalizations covering the observations, but that they have to be motivated independently. Also, for Gapping, a less specific overgenerating rule could be accepted if ungrammatical examples are excluded by independent principles. Overgeneration is limited by semantics as in Sag [47] (Neijt [40:87]), but Sag himself is hardly specific on the point (Sag [47:279]). Neijt restricts generation of unacceptable sentences by the "independent" syntactic constraints we presented earlier (Neijt [40:109-174]). An overgenerative principle cannot be accepted unless the constraints exclude all unacceptable examples generated. This is clearly not the case for the syntactic rules that have hitherto been presented, probably because it is extremely difficult to formulate a generative rule applying both to (maximal) constituents and nonconstituents (cfr. 2.1.). One cannot say, as does Sag, [47:279] that unacceptable sentences will be ruled out by further constraints: we would be committed to a linguistic teleology that is doubtful from a scientific point of view. Neijt [41:79] admits that all constraints have not vet been found, but argues that the problems of replacement have not been resolved either in these cases. One might ask oneself if the problem is adequately dealt with when it is approached mainly from a syntactic point of view. All analyses try to find a syntactic rule that would include a majority of examples. Semantic and pragmatic factors are hardly taken into consideration.

3.5. GAPPING AS AN OPTIONAL RULE

A commonly shared conviction is that the rule of Gapping is optional. Deep (or shallow) structure of the coordinate structure to which Gapping applies can thus be generated as such in surface structure. In most cases however, the full sentence will have an emphatic sense, or will be at least pleonastic.

(75) John buys flowers for Mary and Peter buys flowers for Louise.

This account is only valid if we keep in mind that Gapping is a characteristic of high style. In that context, the sentence cited is hardly acceptable. Ongoing research on recorded corpuses of French (Huyghe, [20]) proves that Gapping and Gapping-like phenomena are rather rare in ordinary speech. Speakers tend to repeat much more than what is ordinarily assumed. Speakers (readers) of high style will judge (75) peculiar in the sense that it stresses an articulation of syntactic relationships without necessity. In a typical nongapped sentence, speakers intend to obtain this effect for expository purposes and reasons of clarity.

(76) "Kant's critique starts from data of the first kind, and the second wave of critical philosophy, the logical analytic movement of this century, starts from data of the second kind."
(David Pears, *Wittgenstein*, p. 28)

If we do not accept that transformations change meaning, we would have a shallow structure generating two sentences in surface structure, one with, the other without Gapping, which is impossible. The only transformations that could change meaning are optional transformations (Partee [43:5]). The gapped sentence should thus be derived from an emphatic structure by a deletion that changes meaning. But if a deletion transformation can change the meaning of a sentence, the condition of recoverability itself could be questioned: is it possible that an element, the deletion of which changes the meaning of the sentence, is reconstituted in deep structure? It seems that to admit this position only leads to uncontrollable restitutions and deletions. Would we derive I sing from Me, I sing by deletion? Moreover, Gapping seems obligatory in a lot of examples; it cannot be reduced to a simple stylistic surface deletion operation.

"... it is better to have generalizations that work but cannot be formulated and applied rigorously, than to have precise syntactic formulations that do not work."

Kuno [26:126]

4. A POSSIBLE NONTRANSFORMATIONAL SOLUTION

Most approaches start from an underlying "fully realized" structure of gapped sentences (except for interpretive analyses and the sketch in Droste-Heyvaert [7:43].) A rule of deletion eliminates identical elements on the level of logical form assuring recoverability. This rule has been shown to be inoperative in a certain number of sentences, and cannot block the generation of ungrammatical sentences. The alternatives of Hudson [18], who proposes a rule of replacement, and of Kuno [25] who presents pragmatic rules, are not able to solve the problems¹¹. The observation that Gapping respects relatively few grammatical constraints will lead us to propose a rule that tries to integrate three levels of description: pragmatics, syntax, semantics.

4.1. TRANSMISSION

We will not start from a reconstituted underlying structure, but from the rather common observation that in every act of communication,

¹¹ Hudson's [17] rule of replacement transforms a *respectively* construction into a gapped sentence.

- (a) John and Mary write poetry in the garden and in the bathroom (Resp.)
- (b) John writes poetry in the garden and Mary in the bathroom.

Gapping is restricted to coordinated structures only and excludes *but* as conjunction (cfr. 2.1.1.). Hudson admits that this approach does not explain why negation is not included in the gap. Hudson [18] drops this solution and proposes a rule of Gapping recording the difficulties in a rather *ad hoc* manner without explaining them. Kuno [25] formulates three interesting nonsyntactic rules for Gapping that have been implicitly included in our analysis. He admits, however, that his analysis cannot explain the (b) example where a (maximal) constituent is deleted. The Achilles' tendon of all transformational analyses of Gapping seems to be the difficulty to formulate a rule deleting (maximal) constituents as well as nonconstituents (cfr. 2.1.1.).

the speaker only encodes what he judges pertinent in reference to the linguistic context. Redundancy is only encoded in order to create a particular interpretation of emphasis, and this characteristic distinguishes sentences with and those without Gapping.

(77) John gives flowers to Mary and Peter sweets to Ann.

(78) John gives flowers to Mary and Peter gives sweets to Ann.

This emphasis consists in an (often unnecessary) articulation of the syntactic relationships in the second clause. If in our approach (77) is not to be derived from (78) for the reasons we mentioned above, the relation between them can be established on another level; in a theory such as that developed by Grice [11], the two coordinated clauses of (78) could constitute the implications of (77) on the conceptual level. Since in (77) we find a clause with a "gap", we are forced to find a means of interpretation. A first observation could be that we will never assume a second clause of a gapped sentence in which a verb different from the one in the first clause would construe the syntactic elements,

NP₁ V₁ NP₂ and NP₁' $*[V_2]$ NP₁'

Hence, from a strictly formal point of view, we can describe (77) as a sentence where only one verb is the constructive node of two clauses with rigorously identical structures. This would explain why the verb always has to be a part of what traditional transformational analyses call the gap. In a general way, the rule could be formulated as follows: a syntactic construction A with the elements $[a, b, c \dots x]$ is related by juxtaposition, coordination, comparison or sometimes by subordination to a construction B $[a', c' \dots x']$. There is a congruence between the two constructions because $(a, c \dots x) \cong (a', c' \dots x')$ and there is absence of congruence because $b \neq b'$. The traditional solution was to suppose a deletion of b' in B under identity with b on the level of logical form. The relations of congruence and noncongruence on the one hand and the syntactic interdependence of the two constructions that results from it on the other hand result in a transmission¹² of an element b' in construction B. In gapped sentences, there is a transmission of all constructive elements, including obligatorily the tensed verb, into clause B until an element of the construction appearing in

 $^{^{12}}$ This presentation somehow takes up again the notion of alphabetic variation on the level of logical form of Sag [47], but under a completely different angle: the variation shows what has to be transmitted in the second construction.

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this clause blocks the transmission. In fact, we are in the presence of a maximal transmission of syntactic features until a new feature that belongs to one of the different classes of features in clause A appears and blocks the transmission of that particular feature. This is not a syntactic rule, but rather a pragmatic rule operating with syntactic elements. It is only an interpretation of the "linking" of the elements of clause B to those of clause A. In the following sentence:

(79) John gives flowers to Mary and Paul to Louise.

Paul and *to Louise* represent syntactic features that block transmission of the constructive elements of clause A. For an acceptable gapped sentence, we need at least two blocking syntactic features in clause B. In order to respect this condition of at least two blocking features, an element of clause A can be repeated in order to produce a gapped sentence.

(80) "Sickness will not always help him to it; not always the death hour!"
(N. Hawthorne, *The House of the Seven Gables*, p. 232.)

No transmission will take place if there is only one element to block, for in these cases there is confusion with phenomena of coordination and Split Coordination.¹³

(81) ?John gives flowers to Mary on Sundays, and Paul*[gives flowers to Mary on Sundays]

¹³ This constraint could easily be questioned in view of the following type of sentences.

John gives flowers to Mary, and sweets. John saw Mary on Saturday, and Louise.

Moreover, Damourette and Pichon [3:296] consider as cases of *zeugme* the following examples.

La sérénité est venue, et la gloire. La côte approche, et la nuit.

Hudson [18:543–547] also tried to incorporate these cases of Split Coordination into his rule of Gapping but the four arguments he presents are not convincing; the first concerns the exclusion of the conjunction *but*, which is, as we saw (2.1.), unjustified. Three other arguments treat negation of both phenomena and cannot be conclusive. Two solutions could be proposed. The first considers these cases as a kind of Gapping characterized by a minimal parallelism and a maximal transmission. A second, and apparently more natural solution is to consider cases of Split Coordination as really such: adjunction of a constituent that can be readily coupled by the hearer with the first constituent of the

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(82) John gives flowers to Mary, and sweets Jean donne des fleurs à Marie, et des bonbons.

Neither must the following sentence be interpreted as having undergone a transmission before the second element of the coordination; this would take up again the conjunction reduction hypothesis.

(83) John gives flowers to Mary and *[John gives flowers] to Paul. Jean donne des fleurs à Marie et *[Jean donne des fleurs] à Paul.

Negation and aussi/also can constitute blocking features.

- (84) (i) Avec deux démineurs tu y parviens; avec un, non.With two cars you can do it; not with one. (cfr also note 5(ii))
 - (ii) Avec deux démineurs, tu y parviens; avec trois aussi.You can do it with two cars; also with three.

In cases of ambiguity, i.e. when syntactic blocking features can be coupled to different syntactic features of clause A, the MDP of Kuno [25:304] applies; these constituents can be most readily coupled with those (functionally identical) that were processed last of all (cfr. 2.4.)

(85) Max wanted Ted to persuade Alex to get lost and [Max wanted] Walt [to persuade] Ira [to get lost].

same functional type to the left. Consider John loves Mary on Saturday, and Louise. Quiet has come, and the glory. Jean est allé à Bruxelles, et Louise. John gives flowers to Mary on Sundays, and to Ann.

John loves Mary on Saturday and Louise *[loves Mary on Saturday].

Unlike in the first solution, the following example can be naturally excluded here because of a pragmatic reason: the antecedent constituent with which the remnant has to be coupled is too far away for the hearer.

*John gives flowers to Mary on Sundays, and Paul

[gives flowers to Mary on Sundays]

*Jean donne des fleurs à Marie le dimanche, et Paul

[donne des fleurs à Marie le dimanche]

This exclusion from gapping may seem questionable. Still, we can argue that we are in presence of a coordination of constituents which respects (maximal) constituent boundaries (cfr. 2), whereas in case of Gapping of a maximal constituent leaving two remnants behind, it seems difficult to speak of coordination of constituents.

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The rule of Gapping must also include sentences of the type called Left Peripheral Deletion (Sag [47:203–209]), as Neijt [40:57–62] has pointed out.¹⁴

(86) John gives flowers to Mary and sweets to Ann. Jean donne des fleurs à Marie et des bonbons à Anne.

The transmission hypothesis easily accounts for these sentences, where two blocking features are present. The transmitted sequence of a gapped sentence can even be discontinuous (2.4.4.).

- (87) John wanted Louise to get married and Wilfred Phoebe. La Californie a élu X sénateur et l'Oregon Y.
- 4.1. STRUCTURAL PARALLELISM

The condition of structural identity of the constituents in the two clauses has been judged secondary in most generative analyses (Stillings [51:251]; Sag [47:192–193]). Sag [47:192] notes, "Gapping remnants must also, in some poorly understood sense, be parallel to corresponding elements in the left conjunct." Hankamer [15:25] had noted it more positively as a constraint on Gapping suggesting that coordinated clauses with Gapping have to be structurally identical. This functional identity or parallelism extends to the highest NP and S nodes. Their internal structure is only relevant when the functions of NP and S' become unclear (cfr infra pp. 218–219).

- (88) Mary wanted boots, but John shoes with laces. Jean a préparé les spaghetti, et Marie la tarte aux amandes que voilà.
- (89) "Burton writes that Bedouins, in Arab cities, fill up their nostrils with their handkerchiefs or with pieces of cotton; Ammianus, that the Huns feared houses as much as sepulchres."
 (J.L. Borges, *Prosa Completa*, p. 78, note 1, translation mine)

 14 Hudson [19] tries to establish a difference between (i) and (ii), arguing that (ii) has the same characteristics as coordinations generated by phrasal conjunction.

- (i) John writes a book and Mary an article
- (ii) John writes a paper in his office and a book at home.

His arguments A and B rely on the acceptability of the conjunct *but* and of more than two constituents in the gapped clause. (cfr supra 2.1.1. and 2.6.). Argument C can be explained by the required functional parallelism for gapped sentences and is not generalisable (cfr p. 38), D is trivially true, E concerns the scope of negation (cfr 2.9.), F is subjective.

Parallelism applies to at least one parallel constituent between the A clause and the B clause. This functional parallelism is often restricted to the participants¹⁵ so as to include the following cases

- (90) In an hour, John reads an article and Peter a book *if he wants to*.
 En une heure, Jean lit un article et Pierre *entièrement* un journal.
- (74) John is going to publish an article and Peter *probably* a book. Jean va publier un article et Pierre un livre, *s'il en a le temps*.
- (14) "Il s'acquit une considération très distinguée de la part du Roi et de ses ministres qui tous le regrettèrent, et son diocèse *infiniment*." (cfr supra ref.).

In these sentences, a nonparallel circumstancial that applies only to the B clause is adjoined to it. But, less easily, the same thing is possible for participants in clause B.

(91) "Je voyais, à Nantes, les femmes porter de l'argent pour des assignats, et, pour rien, aux prêtres destinés à la déportation." (Restif de la Bretonne, Les nuits de Paris p. 284.)

This kind of example is not to be confused with the following, where the participant adjoined in B seems to be transmitted in A. Unlike in (91), the participant can be replaced in the A clause.

- (92) i. John borrows books and Peter articles, from the library. Jean emprunte des livres, et Pierre des articles à la bibliothèque.
 - ii. John borrows books from the library and Peter articles. Jean emprunte des livres à la bibliothèque et Pierre des articles.

This characteristic shows that in (92i), besides Gapping, there is a phenomenon of Right-Node-Raising at work as exemplified in (93).

(93) John writes, and Mary reads, a book Jean lit, et Marie écrit, un livre.

¹⁵ The terms of "participant" and "circumstancial" are used in the sense given to them by Matthews [35:124] corresponding to the French terminology of "actant" and "circonstant".

For Gapping we could then say that if there is transmission of identical features into clause B of the constituents we find in clause A, there is no such transmission of constituents from clause B into clause A.

- (94) John probably beats his wife and Peter, his dog.Jean bat probablement sa femme et Pierre son chien.
- (95) John beats his wife and Peter probably his dog. Jean bat sa femme et Pierre probablement son chien.

A problem arises for adverbs of time such as *frequently*, *sometimes*, *often*. Whereas the ordering of other circumstancials belonging to the same functional category and subcategory in the two clauses is relatively indifferent, even when they are gradually defined, (cfr. 2.3.2. (24)(25) and (96)(97)) adverbs of time require that the adverb of the A clause implies semantically the adverb of clause B (cfr (20)(23)).

- (20) *John sometimes beats his wife and Peter frequently his dog.
 *Jean bat parfois sa femme et Pierre souvent son chien.
- (23) John frequently beats his wife and Peter sometimes his dog. Jean bat souvent sa femme et Pierre parfois son chien.
- (96) John certainly wants to go to the movies and Peter probably to the theatre.Jean veut certainement aller au cinéma et Pierre probablement au théâtre.
- (97) John probably wants to go to the movies and Peter certainly to the theatre.Jean veut probablement aller au cinéma et Pierre certainement au théâtre.

Apparently, adverbs of time require that the blocking feature of clause B blocks semantically the corresponding feature of clause A. This could be due to the fact that adverbs of time belong to a functional category other than the circumstancials we mentioned (*certainly*, *probably*).¹⁶

¹⁶ An argument for this functional difference is that when adverbs of time determine the information of the sentence but not its form (Compléments propositionnels) the other adverbs do not determine the information of the sentence (compléments de phrase). (Cfr Melis [37:144–153]). The gradual behavior of time adverbs in Gapping can then be attributed to their belonging to another functional category than adverbs as *certainly*, *probably*.

4.3. The Major Constituent Constraint

The only syntactic constraint that seems to apply to the elements of construction B is the Major Constituent Condition (2.5.). In a purely syntactic hypothesis of deletion, this condition on the remnants is completely isolated and has no independent support. The MCC follows logically from an hypothesis of transmission: if congruence is to be maintained, the syntactic elements of B have to represent the same grammatical structure as those of A. The existing syntactic relations have to be preserved; [a] has to fulfill the same function as [a']. This explains the impossibility of (cfr also 2.6.)

- (98) *John offered flowers to Mary and Peter sweets Louise.
- (99) *The wall was painted by John and the car Louise.

But it also accounts for (2.1.3.)

(9) *John eats at home and Peter at noon.
 *Jean mange à midi et Pierre à la maison¹⁷

This condition permits however the following sentence where the grammatical functions are parallel and clearly marked (2.6.).

(40)	John gives	{Mary flowers flowers to Mary	and Peter	sweets	to	Ann.
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(39) *John gives Mary flowers and Peter Ann sweets.

Consider also

(100) "The first [the fifth book of the *Eneids* of Plotinus] isn't conceivable outside of the platonic thesis; the second [the *Confessiones* of St. Augustine], without the Trinitarian mystery of faith."
(J.L. Borges, *Prosa completa*, p. 322, my translation)

Grammatical functions not only have to be parallel, they also have to

¹⁷ According to Neijt [40:107] a semantic difference would explain the unacceptability of this example: we are in the presence of two PP. She is unable to exclude this classical example of an illicit *zeugma* or *Gapping*, because in her opinion the notions of identity and parallelism belong to semantics (Neijt [40:38].) According to her, relations between clauses do not belong to syntax.

be marked in such a way that the hearer can "recognize" them in his natural analysis (parsing) of the utterance. This general constraint of "recognition" by the hearer, seems to be able to account for the pragmatic rules proposed by Kuno [25]. We maintain the MCC under the hypothesis that infinitival constructions do not depend on an S' node in deep structure, a position which seems justified at least for French. Hence, the following examples can be characterized by a transmission of a variable sequence of verbs.

(101) John tried to learn to play the piano and Paul tried to learn to play altsax to learn to play altsax to play altsax altsax.

The MCC also applies to constituents of an S' node. It seems however, that the MCC has to be modified in order to account for sentences with a complex NP of the following type (cfr. supra 3.3.)

- (60) i. *John discussed the question of which flowers they saw and Bill which animals.
- (63) John asked which flowers they saw and Bill which animals. Jean a demandé quelles fleurs ils avaient vues et Pierre quels animaux.
- (102) *John read the articles about Einstein and Paul about Niels Bohr.
 *Jean a lu les articles à propos d'Einstein et Paul à propos de Niels Bohr.
- (61) i. John read the books about Einstein and Paul the articles. Jean a lu les livres à propos d'Einstein et Paul les articles.

Apparently, the head of the complex NP has to remain in a gapped sentence, but it does not have to be a major constituent. (cfr Neijt [40:190])

(103) John was standing 10 feet behind the duchess and Paul 15 feet. Jean se trouvait à 3 mètres derrière la duchesse et Paul à 5 mètres.

The fact that only the head of the Complex NP in the B construction

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has to remain in case of partly structural identity with the Complex NP of clause A, could be explained by the requirement that functions have to be clearly marked. The Major Constituent Condition could be restated more generally in order to restrict remnants to the heads of (Complex) NP or PP that are constituents at the same time. This accounts for (34), (10), and also for cases of stranded prepositions (104), the remnants of which have to be considered as constituents.¹⁸

 (104) John takes his tea with sugar and Peter without. Jean prend son thé avec du sucre et Pierre sans. (colloquial French)

This formulation of the MCC comes close to the one proposed by Neijt [41:76].¹⁹

However, the demand for clearly marked functions seems far more important than this constraint. Consider the following sentences

- (105) John discussed the question of which flowers they saw and Bill of which animals.
- (106) "I knew that fear was invented by someone that never had the fear; pride, who never had the pride."(Faulkner, As I Lay Dying, p. 136)

(105) can be explained by the rather idiomatic nature of to discuss the question in English. As such, (105) would respect the abovementioned condition. (106) remains, an eccentric example perhaps, but it seems obvious that its interpretation can only be made out by some kind of pragmatic rule as stated above. To support this view, consider (107) (cfr. fn. 5)

¹⁸ We shall not argue that the MCC also holds for cases of the following type, though they apparently do obey this constraint.

Mary took John's clothes and Louise Bill's.

These examples are cases of \overline{N} -Gapping which is a very irregular phenomenon (cfr Neijt [40:35–36]) that interferes with rhetorical phenomena and substantivization of adjectives.

Les valeurs françaises sont en baisse, les américaines irrégulières. Il a pris le pull rouge, moi, le vert.

N-Gapping often occurs together with sentence-Gapping.

¹⁹ "Constituent variables adjacent to true variables are major constituents" (Neijt [41:76]). It should be clear that any formulation of the MCC is *ad hoc* according to Gapping, because we need a list (language-specific) of prepositions that permit "stranding" in gapped sentences. It is clear that semantically opposite prepositions (*with, without*) will be more easily implied.

(107) "(...) a filter preventing successive infinitives in Italian is blocked by an intervening Wh-trace but not an intervening NP-trace."
 (Chomsky, Government and Binding, p. 182)

Here too, a strong appeal is made to the hearer to take into account the internal lexical structure of the NP, rather than the strict syntactic parallelism which would induce a different lecture. The request for functional parallelism is compensated by the identity of the internal structure of the elements that are to be coupled. It seems that the strict parallelism of gapped constructions can still be violated in another way. It is possible to "delete" over an embedded S' node, but again under the condition that the functional or the structural parallelism is clearly marked for the hearer. This accounts for the relative acceptability of (71) in French.

- (71) ?Jean décide que vingt filles viendront et Marie [décide] que trente garçons [viendront].
- (108) ?*Jean décide que Marie viendra et Louise Paul.

Sentences in which the functions of the second clause are clear seem perfectly acceptable in French.²⁰

- Jean décide qu'il fera comme Paul et Louise [décide qu'elle fera] comme Marie.
 Jean décide qu'il ne mangera que de la viande et Louise que des légumes.
- (109) Jean est parti aux Etats-Unis pour étudier la linguistique générative, et Pierre la littérature comparée.
- 4.4. The Semantic Parallelism Principle

Apart from belonging to the same functional category, parallel syntactic elements of both clauses have to pertain to the same semantic

John decides he wouldn't eat but steaks and Louise but fish.

Both interpretations can be properly marked by intonation.

John decides he wouldn't eat but steaks and Louise [decides she wouldn't eat] but fish. John decides hé wouldn't eat but steaks and [John decides] Loúise [wouldn't eat] but fish.

 $^{^{20}}$ English examples are more ambiguous than French because the emphasized pronoun and the pronoun of the third person coincide, so as to bring up two interpretations of

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category. This constraint is called by Thrainsson [54:610] the Semantic Parallelism Principle (SPP).²¹ This semantic category is obviously selected by the verb. On this level, we can explain the ambiguity of Kuno's [25:304] counterexample to the MDP.

- (110) My brother visited Japan in 1960 and my sister [visited Japan] in 1961.
- (111) My brother visited Japan in 1960 and [my brother visited] my sister in 1961.

Apart from stress patterns, the interpretation depends here on the parsing of the hearer; if functional parallelism and MDP are favoured (111) imposes itself, if the inclusion in the same semantic category is favoured, an interpretation as in (110) will come out. Most commonly, these two levels cooperate so as to make clear the relations between clause A and clause B in ambiguous sentences. In the following case, a factor of complexity seems to intervene.

- (112) *Each of the boys wanted/loved to explore the haunted house, and Susie to sleep in the ghost's bedroom.
 - *Chacun des garçons aimait/essayait d'explorer la maison hantée, et Suzanne de dormir dans la chambre du pendu.

Siegel [50:527] proposes the Operator-Verb Interpretation Condition to exclude these kinds of sentences: both elements that have to be linked with the verb, have to be in the scope of an operator for the gapped sentence to be correct. The author adduces the following sentences

(113) All of the boys wanted to explore the haunted house and all/a few/some of the girls to sleep in the ghost's bedroom.
 Chacun des garçons aimait d'explorer la maison hantée et chacune/la plupart/quelques unes des filles de dormir dans la chambre du pendu.

However, sentences similar to [112] turn out to be correct.

John wanted to be congratulated by Mary, and
(i) Tommy to be kissed by all of the girls. Jean aimait d'être félicité par Marie, et Paul d'être embrassé par la plupart des filles.

 21 "The constituents left behind by "Gapping" tend to be paired with constituents in the first conjunct in a way that maximizes the semantic parallelism between the conjuncts" (Thrainsson [54:610]).

- Mary wanted to kiss John and Susie all of the boys. Marie essayait d'embrasser Jean, et Suzanne la plupart des garçons.
- (iii) Each of the boys wanted a hamburger, and Susie a piece of cake.
 Chacun des garçons choisissait un sandwich, et Marie une tartelette à la crème.
- (115) (i) Each of the boys tried to explore the haunted house and Susie to investigate it. Chacun des garçons essayait d'explorer la maison et Suzanne de l'investiguer.
 - (ii) Each of the boys tried to explore the haunted house, and Susie to explore the ghost's bedroom.
 Chacun des garçons essayait d'explorer la maison hantée, et Suzanne d'explorer la chambre du pendu.

To provide an account for (112), (114) and (115), we must consider that in general, the group V-Aux-V-Inf can hardly be dissociated in the sentence. It seems that in gapped sentences, the detachability of the auxiliary from the infinitive is limited to a certain degree of complexity of the elements of the construction. The lack of clear internal structural and semantic (quantifier) parallellism of the subject NPs in (112), without this being compensated by e.g. a clearer semantic parallellism of S' such as in (115), can constitute such a complexity. This is generally true for gapped sentences; the functional parallellism can become obscure by the complexity of the elements or of other factors. Borges' (89) is only clear because the subject NPs can easily be linked. Similarly, this is true for (114). Comparing the data above, it seems that at least one parallel element of the gapped clause has to be strictly semantically identical to its counterpart in the A clause, in order to "compensate" the complexity of the construction and/or of the other elements.

4.5. PRAGMATIC OPPOSITION

Within the same semantic category, in which the linked elements are included, a pragmatic opposition has to exist between the parallel elements selected by the verb: (a - a'), (c - c') etc.

(116) John often plays the piano, and Mary sometimes the violin.



(117) Jean emmenait Marie au théâtre et Pierre les enfants au cirque.



The pragmatic opposition within the category itself enables us to account for the acceptability of

- (118) *John is afraid to upset Mary, and Peter Louise.
 *Jean a peur de froisser Marie et Pierre Louise.
- John is afraid to upset his mother-in-law and Mary her fatherin-law.
 Jean a peur de froisser sa belle-mère et Marie son beau-père.
- (120) ?John wanted to marry Louise and Peter Mary. Jean voulait épouser Louise et Pierre Marie.
- (121) John wanted to play the piano and Peter altsax. Jean avait envie de jouer une fugue et Pierre une sonate.

(118) and (120) seem less acceptable because informants probably have difficulties to find an adequate pragmatic context in which an opposition of the parallel constituents (represented by proper names!) is possible on this point. Pragmatic opposition is also impossible between the adverbs of

- (122) *Honestly, John told all to Mary and frankly Paul to Ann.
- *Monk usually enjoyed epistrophy and Albert Ayler, presumably, ghosts.
 (Stillings [51:249])

Moreover, in this last example, the adverbs do not belong to the same functional class: *presumably* is a sentence modifier. As such, intonation (2.10.) only reinforces the functional parallelism of both clauses as well as the pragmatic opposition within the semantic categories. It makes the natural analysis of the hearer easier, and it marks the "gap", that is to say, the place where information of construction A is to be transmitted.

This pragmatic opposition can explain the lack of consensus among informants as to sentences of this type that are submitted to them. There seem to be degrees of opposition that are defined on the levels of semantics and pragmatics. In cases of Backwards Gapping (*hypozeugma*), the opposition is extremely well marked.

- (56) Les uns, Wagner; les autres chérissaient Schumann (cfr supra ref.)
- (124) L'un le livre, un autre le cahier, un troisième prit la plume.

The expression *les uns*... *les autres* enables one to mark a very strong opposition. The contrast between the NPs is entirely pragmatic. Postposition of the verb creates a kind of syntactic "tension" that still intensifies the opposition. The "stylistic" effect attributed to Gapping-zeugma probably resides in this stronger or weaker opposition.²² Apart from this semantically marked opposition (cfr also fn. 6(ii)), intonational patterns seem to play an important role in order to oppose the elements of the A clause to those of the B clause. Less acceptable examples such as (20) (25) and (71) seem to be more readily accepted by native speakers when heavy contrastive stress links the elements of both clauses.

4.6. NEGATION

Negation is never transmitted along with the verb (2.9.). This property of Gapping has always constituted a heavy problem for generative analyses: Ross [46:250] notes the difficulty, Sag [47:195] speaks of a "curious property that remains mysterious". If a construction of two conjoined sentences in deep or shallow structure is accepted, it is rather hard to explain why (127) is correct and (126) isn't (cfr (45)):

- (125) John doesn't like applepies and Peter doesn't like sweets. Jean ne donne pas de fleurs, et Pierre ne donne pas de bonbons.
- (126) *John doesn't like applepies and Peter sweets.
 *Jean ne donne pas de fleurs et Pierre des bonbons.
- (127) John doesn't like applepies, nor Peter sweets. Jean ne donne pas de fleurs, ni Pierre des bonbons.

The hypothesis of transmission does not encounter this problem: nor repeats the negation of the first construction, which seems a general

 $^{^{22}}$ Note also that this rule solves the problem of Gapping in dialogue mentioned by Sag [47:37-38] and Neijt [40:191] (2.1.2.). Neijt's [40] rule does not present a real solution: a strictly syntactic rule operating between speakers seems at least awkward. It also accounts for the examples quoted in note 6 which cross sentence boundaries; since the transmission conditions are essentially pragmatic, they can apply to relations between sentences.

rule of negation in proposition coordination.²³ Negation cannot be considered as an adverb, but must be viewed as an operator (Melis [37:29]). Still, a problematic case remains.

(100) "The first isn't conceivable outside of the platonic thesis; the second, without the Trinitarian mystery of faith" (cfr supra ref.)

Here, negation is transmitted to construction B without repetition. This can probably be explained by the negative verb required by the prepositions *outside of* and *without* and by the strong semantic opposition between the two clauses.

4.7. COMPARISON AND EMBEDDING

Transmission can also be used for comparisons with Gapping, that have the same properties as coordinated gapped clauses.²⁴ According to Le Bidois [30:89], comparative clauses are a privileged domain of *zeugma*.

- (128) Jean a écrit plus de livres que Pierre d'articles. John spoke more vehemently against Mary than Tom against Jane.
- (129) "That North country is full of horse-dealers as an old coat of lice." (R. Kipling, Kim, p. 34)

As we noted earlier, (2.7.) comparative backwards Gapping can also be found.

²³ In French, still another problem with negation subsists.

*Jean n'écrit pas de livre, ni Marie d'articles.

The difficulty is due to the apparition of the article de, that is vinculated to the presence of pas in construction A. We also find in somewhat familiar speech

Jean n'écrit pas de livres, et Marie pas d'articles.

²⁴ This transmission approach must not be extended to the problem of Comparative Deletion. In comparative clauses of English and Classical French, Gapping seems to overlap with Pseudo-gapping to a certain extent.

John spoke more vehemently against Mary than Tom (did) against Jane

Cases of Pseudo-gapping in French (cfr fn. 4) can also be realized as gapped constructions. The further relationships of Gapping and Pseudo-gapping are unclear to me for the moment (cfr also note 4). (130) "Comme Chopin par les notes, il faut se laisser guider par les mots."
(Gide Journal, p. 285 cité par Le Bidois [30:85])

Le Bidois [31] observes that chiasms are possible, as is the case for non comparative *zeugma*.

(131) "Certains quartiers sont farcis d'agences comme de marrons la dinde de Noël."
"(. . .)jusqu'à ce que l'ennemi soit défait et lavée la tache nationale." (De Gaulle, Mémoires) (cited by Le Bidois [30:87] and [31:268])
"(. . .)l'autopamphlet d'où les égratignés sortent grandis et renforcée la cible." (B. Poirot-Delpech, Le Monde, 26 oct. 1984, p. 22)

Cases of Gapping into subordinate clauses seem to be rather rare. (2.2.1.)

- (132) *?John writes an article though Mary a book.
 *?Jean écrit un article bien que Marie un livre.
- (133) *?John writes an article while Mary a book.
 *?Jean écrit un article pendant que Marie un livre.
- (134) Il mangeait des épinards tandis que son frère des salsifis (colloquial French).
- (135) Jean a pu acquérir sa part de l'héritage avant que son cousin la sienne.
- (136) John loves Mary, although not Mary John.

Impossible cases are ruled out for reasons of inintelligibility; the semantico-pragmatic opposition that is required is not always compatible with implicative and temporal relations.

There is still something to be said about the status of the gap in our approach. Actually, we made a distinction between omission and deletion, rejecting the former as an explanation for the latter. The gap is not a result of deletion; it only marks the place in which identical elements have to be transmitted. Its presence can be proven by independent arguments; there is never a phonetic link between the blocking elements of construction B, if elements from construction A have to be transmitted between them. This seems to be one of the major disadvantages of the nontransformational analysis of Stump [52:472–482]. While excluding deletion from Gapping, he also eliminates any presence of an empty place in the B construction. The significant empty place must not be confused with the explanation that considers the gap a result of deletion.

5. CONCLUSION

In our discussion of Gapping-zeugme we have tried to point out the defects of transformational approaches that mainly proceeded by a mechanical rule of deletion, unable to account for a certain number of its properties. It seems preferable to exclude deletion as an explanatory principle in syntax. Its explanatory power is only apparent by reducing language to some "basic operators." Actually, nothing has been explained as to the real functioning of language. Reconstruction of "deleted" elements has only a paraphrastic value; the presuppositions of the utterance are made clear. A deletion hypothesis confounds the levels of syntax and pragmatics while trying to include the former in the latter.²⁵ Grinder [12:15] is surprised to find so few arguments for deletion operations: actually, there are none. Moreover, deletion does not seem falsifiable; it cannot be proved nor refuted.

Transmission as an analysis that excludes deletion on both theoretical and factual grounds, seems capable of a coherent explanation of the phenomenon. Some problems remain unsolved, but they seem to be of a more general kind such as the sort of elements that can be coordinated. Briefly, it is the functional parallelism of at least one element of the minimally two elements present in construction B, with an element of construction A, that induces a transmission of syntactic features from A to B. A further requirement is that corresponding features belong to the same semantic category, but with an important pragmatic opposition between them. This approach incorporates the pragmatic rules of Kuno [25] and restricts the application of transmission to coordination of propositions with propositionlike groups of at least two constituents, so as to exclude apparently similar cases such as Conjunction Reduction, Comparative Deletion, and Split Coordination, which need no more than Gapping an explanation by deletion. Overt case marking, heavy contrastive stress patterns, strong semantic opposition between functionally linked elements, identity of the internal structure of these elements, all have the same goal: they indicate

²⁵ See on this point Searle [40:165–169] for the arguments against deriving imperatives from underlying declarative structures.

in what way functionally identical elements have to be linked if sentences can be interpreted in different ways; where material from the A clause has to be transmitted. The more these "devices of recognition for parsing" are used, the more awkward sentences become acceptable.

In a dynamic parsing model, the transmission (feedforward) and blocking (feedback) could be seen as processes that are triggered when the second constituent is processed by the speaker in the B sentence.

Though Gappang is a part of the high style of speech, it seems possible to formulate the conditions in order to cover all possible examples, both literary and less literary.

The examples cited will have made clear that Gapping can hardly be a part of sentence grammar since it violates nearly every possible syntactic constraint rather arbitrarily.

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